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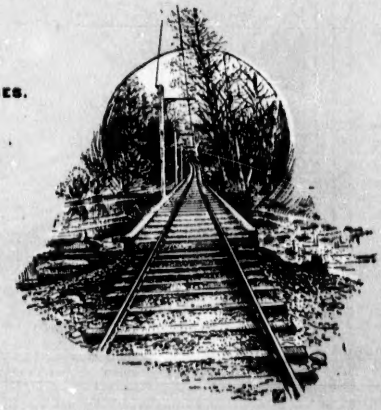
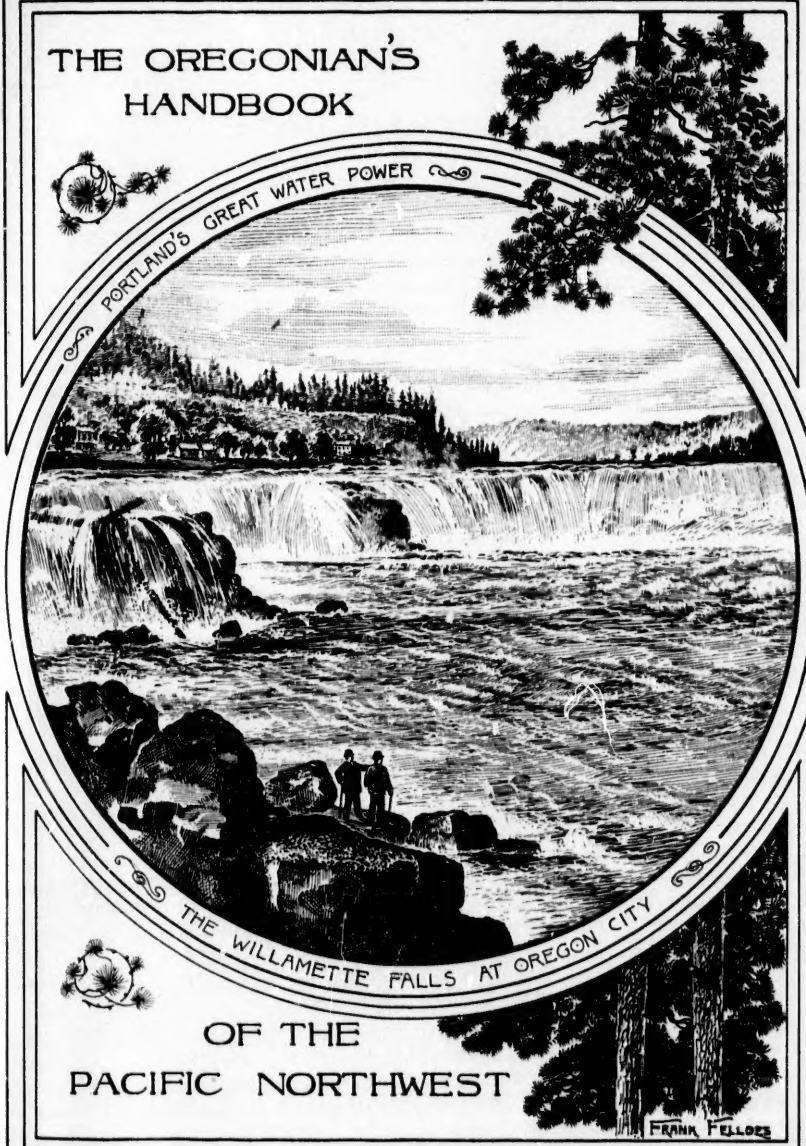


THE OREGONIAN'S HANDBOOK



OF THE PACIFIC NORTHWEST

ENGRAVED BY THE OREGONIAN.

"THE OREGONIAN" BUILDING, PORTLAND.

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"THE HANDBOOK."

In the following pages will be found a mass of interesting matter on the states of Oregon, Washington, Idaho, and Western Montana as well as extended mention of British Columbia and Alaska. The data for these articles has all been carefully gathered by THE OREGONIAN through personal visits of its representatives to the different parts of this vast territory, and the book as a whole contains more information offered in an interesting shape than was ever before afforded in any single publication.

The claim of infallibility is not made for "The Handbook." In compiling an immense amount of matter, such as is contained in a publication of this nature, mistakes must occur, a lapse, for which the intelligent reader will make allowance. The aim of the publishers of "The Handbook" has been to offer to the public a work, the reliability of which in the main could not be questioned, and the few mistakes which will be found in the work will not affect in the least its general repute as a reliable publication on the Pacific Northwest which is worthy of the most careful attention.

The publication of "The Handbook" has involved a year's hard work in gathering data and in the compilation of the matter it contains. Certain minor changes have taken place in some of the industries described in "The Handbook" since the information for these articles was obtained. The changes referred to, however, have simply involved a slight difference in a few cases between the estimates of output, etc., published and these estimates as they exist today. The general conditions of all the industries covered by "The Handbook" are the same today as they were when the information was gathered for this publication. For 20 years past there has been a steady increase in the volume of exports made from the Pacific Northwest, and that the industries of this section will show a steady increasing importance with each successive year in the future is patent to everyone who has the least knowledge of this vast territory and of the opportunities presented for the rapid development of its varied resources. It is this steady growth of its business that makes a reliable publication on the Pacific Northwest of such signal importance at the present time, and it is the opportunity for the profitable investment of capital in the development of the very industries here that have already built up many large fortunes in this part of the West that insures a future prosperity to the territory covered by "The Handbook" which but few parts of the continent have enjoyed.

The compilation of matter for "The Handbook" has not followed in the lines which matter of a kindred nature has heretofore been handled for similar works. Time tables of transportation lines, reliable maps of the country and information of a purely statistical nature are found in the numerous railroad pamphlets which are distributed gratuitously on all the transcontinental lines of road. The general style adopted for the articles contained in the present publication is of an easy descriptive nature which will appeal directly to the interest of the reader where statistical matter in tabulated form is valuable only for reference. A large amount of statisti-

cal matter is furnished in "The Handbook," but this is made an incidental feature to the principal descriptive articles of the book. Enough statistics are furnished to insure the reliability of any general statement made in the book, but it will not be necessary for the reader to wade through a mass of figures to enable him to reach a conclusion regarding the status of any industry of this section.

The large number of illustrations which "The Handbook" contains will be found valuable in aiding the reader to form something of a just estimate of the grandeur of Northwestern scenery, the present standing of its industries and the general types of buildings which its leading centers of population contain. No city of the East is better built than are the leading trade centers of the Pacific Northwest, and the many fine buildings of Portland, Tacoma, Seattle, Spokane, Helena, Butte, and other cities of the Northwest will vie favorably with the structures which line the main business streets of New York and Chicago.

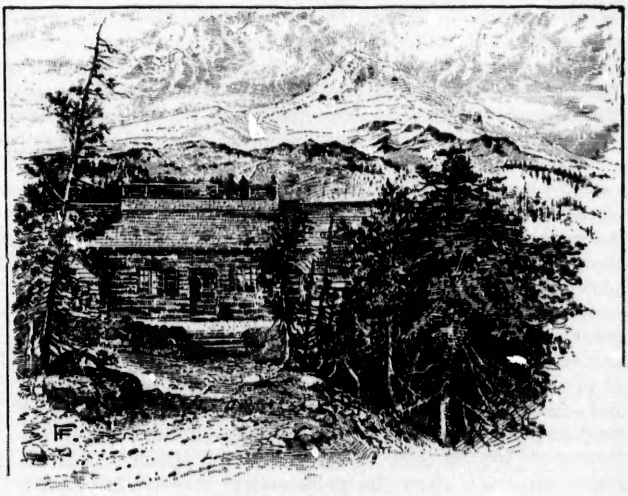
All travelers over the transcontinental roads terminating on the shores of the Pacific ocean have noted the interest taken by their fellow passengers in the principal centers of population passed by the moving train. Such questions as "What town is this?" "What is its population?" "What supports it?" are always asked by the majority of travelers over any of the transcontinental lines of railroad. These questions are all answered satisfactorily in "The Handbook." "The Handbook" also contains a vast amount of valuable information in its articles on the different industries of the Pacific Northwest and on its most characteristic features. The articles on coal, lumber, mining, fishing and the other industries of the Northwest will furnish all the information desired by the reader on these resources. In addition to these special articles, however, much valuable information is contained on the resources of different parts of this territory in the carefully written articles on its principal centers of population. The article on Portland, for instance, includes extended mention of the leading features of the country which supports the city. In the Tacoma article much space is given to a description of the leading industries which have contributed to the prosperity of the city, including mention of the great coal mines of the Puget Sound country, its vast lumbering interests and its export trade. In the Seattle article will be found much interesting matter connected with the early settlement of the country bordering on Puget Sound and on the wonderfully rich district which trades with the latter leading center of population. In connection with the article on Fairhaven is published reliable matter on the coal mines back of the city, which produce the best coking coal on the coast, and the importance of Bellingham Bay as a harbor of great coming importance. The mines of the Cœur d' Alene, Kootenay and Colville districts, as well as the rich wheat fields of the Palouse and Big Bend sections of Washington, receive extended mention in the interesting article on Spokane, the leading inland city of the state. No part of the Pacific Northwest has been slighted in "The Handbook," and this work contains a greater amount of matter on this section than was ever before offered to the public.

The complete index furnished with "The Handbook" will enable the reader to turn to any subject connected with the Pacific Northwest on which he desires information without a moment's delay. The book as a whole is worthy of more than passing notice, and it is presented by THE OREGONIAN with the belief that it will redeem every promise that has been made for it.

The Pacific Northwest.—That part of the United States, including Alaska, lying west of the Main Divide of the Rocky Mountains and north of California and Nevada forms, with British Columbia, what is known as the Pacific Northwest. The states embraced in this magnificent sweep of country are Oregon, Washington, Idaho and Western Montana. The Pacific Northwest has an area of 1,356,338 square miles. This is over one-third as large as the area of all the rest of the United States, and is larger than the combined areas of France, Germany, Great Britain and Ireland, Italy, Portugal and Greece. The total population of this vast region today does not exceed 1,200,000, less than one person for each square mile of its territory. The country contains a little more than a million people today where ten times this number could be comfortably supported from the fuller development of its resources, and it is this magnificent promise of future advancement that is the country's chief claim for the attention of the world at the present time.

The Pacific Northwest extends from the semi-tropical valleys of Southern Oregon to the ice fields of the Arctic ocean. The climate of all this region, with but few exceptions, is a balmy one. All that portion of this section bordering on the coast for 1,000 miles or more north of Portland enjoys the climate of Virginia, with almost an entire absence of snow in winter and without extremes of heat during the summer months. Eastern Oregon, Eastern Washington, Idaho and Western Montana experience colder winters than does the section of the Northwest west of the Cascade Mountains, but in no part of the Pacific Northwest, with the exception of the interior of Alaska and the mountainous regions of British Columbia, are the cold spells of winter as protracted, or is the cold as intense, as is noted in the winters of the Eastern states.

From its most northern end to its southern boundary and east from the Pacific ocean to the rugged summits of the Rocky Mountains the Pacific Northwest is a vast storehouse of natural wealth. It is doubtful if in any other section of equal size in the world has nature been so lavish with her gifts as she has been in the country bordering on the Pacific side of the United States. Contained in the Pacific Northwest are the most extensive coal measures in the Union; it is here that are found the greatest and most valuable forests in North America; the largest silver and copper mines in the world have been opened within its borders, and



MT. HOOD, OREGON—FROM CLOUD CAP INN.

MT. HOOD-LADD GLACIER.

lying side by side with these great deposits of silver and copper, are vast ledges of gold, nickel, lead and iron ores. It is a country of great rivers, teeming with the finest of food fishes; a few miles inland are hundreds of fine lakes stocked with trout, and now utilized largely by water transportation lines, and on the western border of Washington, within its limits, is the most beautiful inland sea in the world. This is known as Puget Sound. Its importance can be appreciated from the statement that it floats vessels of any depth; its main channel, with its numerous arms, is the gateway to thousands of square miles of rich coal, timber and agricultural lands, and its surface is never swept by storms. It is possible for a steamer to leave Tacoma at its northern end and steam for 1,000 miles or more north over a water course as smooth as any river.

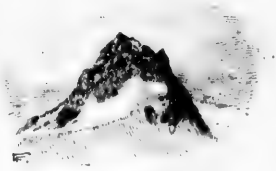
In the Northwest, nature has done everything on the most lavish scale. The mountains are high, the prairies are broad, the rivers are wide and the resources are inexhaustible. The country has made wonderful advancement during the past 10 years and it is not improbable that the next 10 years' growth will cause the Pacific Northwest to rank among the well settled parts of the United States.

The many carefully written articles which will be found in other parts of "The Handbook" on the various resources of the Northwest give much valuable information on the extent of these resources and the opportunities afforded for their development. The reliability of the statements made in these articles is borne out by much statistical matter, carefully gathered. The development of the many resources of the Northwest has but reached the stage where their value has been accurately determined. It is but a few years since, that all of this country was a trackless wilderness. In the early 40's and 50's a few intrepid adventurers braved death by starvation in crossing the plains to Oregon. These early pioneers scattered out among the valleys and hills of this region and they thus formed a superficial knowledge of the great diversity of its resources. Some of these men returned to their homes in the East, and the stories they told there of the possibilities for future growth in the Northwest were directly responsible for the large immigration which poured into the then territories of Oregon and Washington a few years later.

That the immigrants who early sought homes in the Pacific Northwest found a country here which fully met their expectations is evidenced by the solid prosperity of the country today. The output of its products has increased out of all ratio with its increase in population, and, as a result, people have lived better in the Northwest than they have in most other parts of the United States. New avenues of wealth are constantly being opened here, and the development of these resources is all of a most substantial nature. From the time the Argonauts of California first crossed over the summits of the Siskiyou mountains into Oregon and discovered gold in the sands of the beautiful streams of the fertile valleys of Southern Oregon, the mines of the Pacific Northwest have produced $670,000,000 in gold, silver, copper and lead. Since the time when the gold-seekers washed $70,000,000 in the short space of a few years from the gravel of Alder

MT. HOOD-HEAD OF SANDY RIVER.

gulch, Montana, discoveries of precious metals have been made in nearly every part of this vast region. In 1892 the gold, silver and copper mines of the Pacific Northwest added to the wealth of the world the enormous sum of $57,815,346. The greatest mines on the continent are today located within the borders of this section and the development of the mining industry here is but yet in its infancy. Another great industry of the Pacific Northwest today is lumbering. The value of the lumbering output of this region for 1893 was estimated at $26,000,000.



MT. HOOD—CRATER ROCK, SHOWING "BACKBONE."

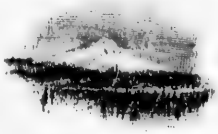
In the many beautiful and highly fertile valleys of the Pacific Northwest are many fine farms. There are today, however, millions of acres of the finest land in the world lying idle within the limits of this country, land which produces annually yields of wheat equalled in no other part of the Union. In 1893 the aggregate wheat crop of the Pacific Northwest was, approximately, 27,000,000 bushels.

In the waters of Puget Sound and on the fishing banks of the ocean just off the coast as well as in the numerous bays along the other parts of the coast are vast quantities of the best varieties of food fishes. The Columbia, Fraser and Yukon rivers and the countless smaller streams teem with salmon and other fish. The output of the fisheries of the Pacific Northwest is valued at $10,000,000 annually. In the following pages will be found a complete description of these fisheries and their importance among the present great industries of the Northwest.

The Pacific Northwest is a natural wonderland. Here the works of nature have taken many beautiful and fantastic forms. Every phase of landscape scenery is found in this region and descriptions of the most interesting of this scenery will be found in the many articles of "The Handbook." The Columbia river, the beautiful lake region of Eastern Washington, Northern Idaho and Southern Oregon and the Puget Sound country are all famous for the picturesque grandeur of their scenery, and it is doubtful if any part of the world of equal extent with the Pacific Northwest is as attractive in scenic beauty as is the territory covered by "The Handbook."

Until 1846, when the international boundary line between the United States and the British possessions to the north was established at the 49th degree of north latitude, the territory lying between Oregon and California, the Pacific ocean and the Rocky Mountains was occupied jointly by Great Britain and the United States. The settlement in 1846 of the long standing dispute over the ownership of this vast region was followed by the organization of the territory of Oregon. This was accomplished August 14, 1848. Oregon was admitted as a state into the Union February 14, 1859. The area of the state today is 95,274 square miles, of which 19,874,331 acres remain unsurveyed. The population of Oregon, according to the official census of 1890, was 313,767.

Washington Territory, organized in March, 1853, comprised the present states of Washington, Idaho, Montana west of the Rocky Mountains and a portion of Wyoming. By the creation of the territory of Idaho 10 years later, Washington was reduced to its present area of 69,994 square miles. Of this area 23,432,060 acres are unsurveyed. Washington was admitted as a state February 22, 1889. It now contains a population of 349,390, and is making the most substantial advancement in wealth and population.



MT. HOOD FROM STAGE ROAD.

When organized in 1863, Idaho Territory included within its limits the present state of Montana and all of Wyoming except the southwestern portion. By the creation of the territory of Montana in 1864 and the territory of Wyoming in 1868, Idaho was reduced to its present area of 86,294 square miles. It contains today 43,745,194 acres of land that are unsurveyed. Idaho was admitted as a state June 3, 1890. The population of the state is 84,385. In May, 1864, the territory of Montana was formed from Idaho, and in 1873 by the annexation of about 2,000 square miles taken from Dakota, it was given its present great dimensions. It is now the third largest state in the Union, it containing an area of 146,080 square miles. Montana was admitted as a state February 22, 1889. The lands unsurveyed in Montana cover an area of 70,192,882 acres. The population of the state is 132,159.

MT. HOOD—FROM GOVERNMENT CAMP.

Prior to 1858 the territory of British Columbia was held by the Hudson's Bay Company under lease from the Crown. In that year the discovery of gold on the Fraser river in the province caused a stampede to that section and the region was organized as a colony of Great Britain. The following year Vancouver Island, just off the mainland, was included in this colony. British Columbia has an area of 383,000 square miles and a population according to the census of 1891 of 97,612. It is on Vancouver Island that the old and very wealthy city of Victoria is located. Since 1858 the mines of British Columbia have produced $53,200,000 in gold. The gold output of the province in 1893 was approximately $600,000. The product of the British Columbia fisheries from 1876 to 1893 was valued at $26,000,000. The exports from the province now average $7,000,000 a year.

Alaska, the latest territorial acquisition of the United States, has an extreme length north and south of 1,100 miles and an extreme breadth of 800 miles. Its coast line, including its islands, is 26,364 miles. It has an area of 577,390 square miles, which is nearly one-sixth the total area of the United States. Of the 31,759 inhabitants of Alaska, less than 5,000 are whites. In May, 1867, a treaty was signed by which Alaska was sold to the United States by Russia for $7,200,000, a sum which was considered by many at the time as vastly in excess of what the acquisition was worth to the government. In 1870 the treasury department leased to the Alaska Commercial Company for a period of 20 years the sole privilege of taking seals on Prebilof Islands in the territory. The number of seals which could be killed by the company each year under this lease was limited to 100,000. Up to 1890 the annual value of fur seal skins exported from these islands was about $1,500,000. The lease expired in that year when a new lease was made between the United States and the company, in which the annual catch of seals by the company was limited to 60,000. The total value of the seal skins taken in Alaska from 1867 to 1890 was $33,000,000, and the combined value of all the products of the territory during the same period was $35,000,000. The proceeds of the government tax on seal skins taken in the territory during the same time was $5,871,000, or over five-sevenths of the total price paid by the government for the purchase of Alaska.

MT. HOOD—THE SUMMIT

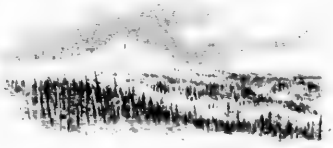
Topography and Climate of the Pacific Northwest. (By B. S. Pague, formerly in charge U. S. Weather Bureau, Headquarters, Portland, Oregon.)

TOPOGRAPHY.—Omitting from consideration the Cascade Mountains, the country under discussion has an elevation of from sea level to 8,000 feet. This latter height is found over a small area in extreme Northeastern Idaho, in Central Idaho extending northeastward into Montana, and in the northwestern portion of Montana. These elevations form the main watersheds for the country second to those formed by the Cascade Mountains. These latter have peaks extending upwards of 10,000 feet.

MT. RAINIER—WASHINGTON

The country throughout is of volcanic origin, hence consists of an undulating surface with immense plateaus, the latter having an elevation of from 1,000 to 4,000 feet. The distinguishing topographical feature is the Cascade range, rising quite abruptly and traversing Washington and Oregon almost due north and south; beginning at the northern boundary line of Washington, at about the 121st degree of longitude, west from Greenwich, thence southerly, inclining slightly to the southwest and entering California slightly to the west of the 122d degree of west longitude. The continuity of this mountain range is broken at almost the 46th degree of north latitude by the Columbia river, which flows through the mountains near to this place. The general mountain range is higher in the southern portion of Washington than elsewhere. The extreme apex is reached at Mount Rainier, Washington. *

The Coast range of mountains extends from the peninsula of Washington southward along the coast into Lower California, being broken by the Columbia river. Their elevation in Washington ranges from 1,000 to 8,000 feet, the latter being the height of Mount Olympus, the apex of the Coast range. In the central portion of that part of Oregon which they traverse, their elevation reaches 3,000 feet over a small area. Between the Coast and Cascade ranges are to be found many fertile valleys whose elevations range from a few feet to 3,000 feet above mean tide level. To the east of the Cascade Mountains are principally table-lands whose elevation is from 1,000 to 4,000 feet, except in the valley formed by the Columbia river, which extends over a large portion of the State of Washington to the east of the Cascades. This valley is 2,000 feet and less in elevation.

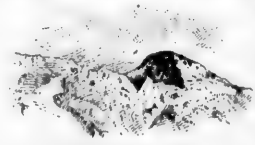


MT. HOOD AT TIMBER LINE.

From the valley of the Columbia there is an almost regular increase in elevation

* There has never been any absolute measurement of the mountain peaks of Oregon and Washington, but the following are believed to be as near accurate as can be obtained, save by triangulation; taken from Gannett's U. S. Geological Survey Report, 1884 (Measurement in feet): Mt. Rainier, 14,444; Mt. Hood, 11,225; Mt. Baker, 10,827; Mt. St. Helens, 9,750; Mt. Pitt, 9,818; Mt. Olympus, 8,138.

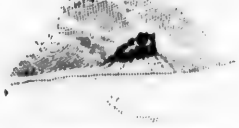
to the summit of the Rocky Mountains; the western portion of Montana has an elevation of from 4,000 to 8,000 feet, while almost the entire state of Idaho has an elevation of from 2,000 to 6,000 feet. Thus it is seen that from the shore of the ocean eastward to the eastern boundary line of Idaho and to the central portion of Montana there is a continuous rise in the elevation. A map giving the contour lines of this portion of the United States, would show a marked irregularity in their direction, and marked gradients between them. The various elevations account for the marked climatic difference, the distribution of rain and snowfall, the character and constituent parts of the soil, the surface and sub-soil drainage of the water; so that, in considering a country, the soil, topography and climate must each be considered, singly and collectively, for each and all depend upon each other and upon the whole as a unit.



MT. HOOD-ICE HUMMOCK, ELIOT GLACIER.

A birdseye view of the area under discussion would show mountains, hills, dales, valleys and streams. From the Missouri river westward there is a gradual increase in the elevation of the land, a gradual breaking up of the prairies and a more marked appearance of mountainous conditions, the latter of a more barren nature than will be found on the western approach to the apex or crest of the Rocky Mountains. From the ocean, as distance increases the forests decrease. The country bordering upon the ocean is, or has been, densely covered with timber. The Coast range of mountains from the Straits of Fuca southward is a continuous growth of the finest timber. Crossing the valleys lying between the Coast and Cascade ranges of mountains, the topography and soil are peculiarly adapted to the growth of trees, and this land when cleared, leaves conditions ideal in their character for agricultural purposes. We find the Cascade range, especially the western side, possessing timber unlimited, almost, in quantity, which decreases from the crest of the mountains eastward, and especially so from the eastern foothills of the Cascades on to the crest of the Rockies. The vegetable growth and the various topographical features depend entirely upon the climatic conditions, to be discussed in the accompanying pages.

Climatology depends mainly upon the mountain ranges. Their extent and area and the topographical features of a section should be thoroughly understood before entering upon a study of the climate. The mountain ranges and the basins should be carried in mind, thus facilitating the understanding of the changes in temperature and distribution of moisture. Hence the ranges of mountains—the Coast, Cascade, and the Bitter Root mountains of Idaho, the basins of Rogue River, Umpqua, Willamette, Puget Sound which embrace Puyallup as well, the Columbia, Snake and smaller basins through Idaho and Western Montana—all enter, in a greater or less degree, into the discussion of topography and climate, and each possesses its various climatic changes. The following statement based on deductions from "Gannett' Dictionary of Elevations," will in this connection, prove of great value:



MT. HOOD-ILLUMINATION ROCK.

	Approximate Area in Square Miles.	Mean Height above Sea Level Feet.	AREAS IN SQUARE MILES BETWEEN					
			Sea Level & 1,000 ft.	1,000 and 2,000 feet.	2,000 and 3,000 feet.	3,000 and 4,000 feet.	4,000 and 5,000 feet.	Above 5,000 feet
Washington	70,000	2,600	16,000	18,000	15,400	6,900	4,400	9,400
Oregon	95,000	3,800	11,000	11,300	10,800	11,000	30,000	21,000
Idaho	86,300	4,700	None	1,100	13,200	16,000	22,200	34,500
Western Montana	47,500	5,900	None	750	9,750	11,000	16,000	10,000

The large area of Washington having such a large percentage of low elevation is due to the great Puget Sound basin, the coast district and the great valley of the Columbia. Oregon's high elevation is due to the high plateau east of the Cascades, which gradually increases to the higher elevation of Idaho and Montana. The foregoing general description of the topography of this country, covering an area of about 300,000 square miles which, if properly handled, would fill more than the present volume, should be borne in mind by the reader, while following the climatic discussion in the following chapter. If the rainfall were projected on the same map as the lines of contour, a remarkable coincidence would be noted; in fact, the climate of this section is so directly dependent upon features of topography that at least this outline of topography must precede a discussion of climatic conditions.

MT. HOOD, BROKEN MOUNTAIN NEAR SUMMIT.

THE CLIMATE.—In 15 degrees of longitude (110° to 125°) and in 10 degrees of latitude (40° to 50°) are seldom found such climatic changes and conditions as are found in the section now under discussion. The portion of the Northwest west of the Coast range has a climate almost marine in its character, while to the east of the Cascades is found almost a continental climate. The entire subject might be confined to a few words if but literal facts were wanted, but these should be explained in order that the reader may thoroughly understand the causes of the marked changes, the distribution of temperature and of moisture. The temperature along the coast usually ranges from 30 to 55 degrees during the winter months and from 50 to 80 degrees in the summer months. The precipitation varies from 60 to 80 inches annually. In the section lying between the Coast and Cascade ranges the temperature during the winter months ranges from 15 to 60 degrees, in the summer months from 50 to 90 degrees and the annual precipitation varies from 55 inches along Puget Sound to 20 inches in the southern portion of Oregon. To the east of the Cascades and extending eastward to the eastern line of Idaho, thence northerly to the British possessions, the range in temperature is much greater and the precipitation much less. The temperature in winter months ranges from 40 degrees above to 41 degrees below zero, the latter at Helena. In summer months it ranges from 44 to 107 degrees, the latter at Boise City, Idaho. The precipitation varies from 10 to 20 inches. This brief statement shows a decrease in the precipitation from the ocean eastward, while the temperature increases in range and in severity of extremes as the elevation increases and successive degrees of longitude are passed to the eastward.

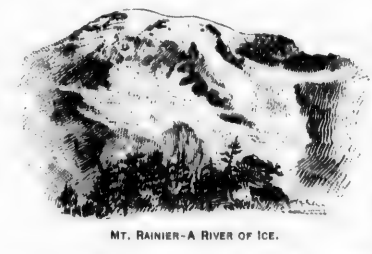
There are several marked causes which produce these marked and almost unusual climatic changes. The ocean is the great modifier of range in temperature and prevention for extreme cold and extreme heat. The ocean's influence fails to reach in its great effects to Montana and Idaho, due to the mountain ranges. Over the major portion of Washington, Oregon and the western portion of Idaho the seasons are well defined and are divided into the wet and dry seasons. These seasons are more marked west of the Cascades than to the east of them. The influence exerted by the ocean and by the topography explains the peculiar weather types to be found in this section. Hence it would be well to treat of the oceanic and mountain influences.

MT. HOOD.
STEEL PARTY AT CRATER ROCK

The largest of all the oceans, the Pacific, is least subject to perturbing influences of a local character. The conditions are constant over large areas; its currents, both of wind and water, are drawn in broad sweeping curves, in which extent of space and time of passage serve to over-ride all mere local or temporary modification. Thus, it is enabled to present almost the ideal problem of oceanic circulation, and to array upon the climate of this section a few masses of simple influence which becomes involved and difficult of study only through the continental disturbances. Without interruption, that part of the North Pacific ocean which may be considered as modifying the climate of this section, stretches away over very nearly 100 degrees of longitude. To the west it is bounded by the extreme Orient, the islands of Japan with their northern projection over the Kuriles to the coast of Kamtchatka and their southerly connections with the Philippines. The northern limit is drawn by the Aleutian islands and the eastern border is the shore of North America. To the south no consistent mass of land appears to hem this ocean in, yet the barrier is none the less strong, because it may be measured only with the instruments of the meteorologist. It exists at the 30th parallel of north latitude. Below this boundary line is the region of the northeast trade wind and the westward drift of the equatorial current, and these two serve sufficiently to bound in wind and water the great basin above. It is a basin within these limits, a rough ellipse having a major axis of 100 degrees of longitude and a minor axis of 25 degrees of latitude. It has its characteristic system of circulation both of atmosphere and sea.

MT. HOOD-BARRETT'S SPUR.

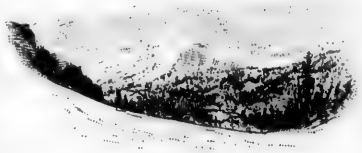
The strongly individualized ocean current of the region is the Kuro Siwo or Japan gulf current. Developed from the cumulative progress of the equatorial drift and directed by the rapid alteration in the plane of the sea bottom and the trend of the Asiatic coast, this warm stream moves across the whole Northern Pacific ocean. Occurring in a broader sea it shows several important differences from the gulf stream. It has a slower motion, its warmth is not so strongly contrasted with the water through which it flows, and the wind blowing counter to its course frequently avails to deflect it or even check it entirely. Its eastern development and dispersion has been for years a battle-ground for theorists, and even now it is impossible to say definitely that it reaches any part of this coast, yet it is generally accepted that it does. Beyond a question of doubt the Japan gulf current is the main cause of the modified climatic conditions which prevail over the greater portion of this section. The mountain chains act as the second great modifier, for by them the winds from the arctic regions are deflected to the east, thus allowing the ocean winds, carrying with them the temperature there prevailing, to spread over and temper the otherwise cold winds and air. These winds have a clear sweep across many thousands of miles of sea, and in all their course they incur no resistance save such as is caused by convective friction due to varying amounts of pressure within their mass. But the moment they cease to flow over the sea and begin their course over the continental mass, they are subject to violent perturbations, and present all the features of



MT. RAINIER-A RIVER OF ICE.

turbulent motion, its irregular and rapid changes of pressure, its rapid expansion, its sudden alteration of the saturative constants, and variation of temperature.

The wind drawn in from the sea by the general circulation of the atmosphere may be taken to hold in suspension the maximum amount of moisture, and, other things being equal, to approximate the saturation amount theoretically to be expected in air of a given pressure and at a given temperature. Advancing upon the land the air current immediately encounters perturbing influences of many sorts. Without taking the reader through a labyrinth of meteorological or scientific phrases, it will be sufficient for the purposes of this description of the climate to relate that the moisture-laden atmosphere, carried by the general circulation of the air and moving towards depressions in the great atmospheric envelope, the moisture is condensed by being forced against the mountain side, thence upward, and the major portion being precipitated on the windward side, that which is still held in suspension is carried eastward, where new conditions are met with and a possibly new mixing of the atmosphere takes place. New temperature conditions are met with, the disturbing cause, the depression in a part of the atmosphere near at hand, continues the turbulent motion and moisture is precipitated over the country to the leeward of the mountains; on its movement eastward the second range of mountains is encountered, higher than the first, and possessing a lower temperature, which acts as a great resistance to the outward march of the disturbing element and the passage winds from the ocean to its rear, the moisture is again precipitated on the windward side of this second range, and, if the disturbing cause is sufficient, it crosses the second range, meets another temperature condition, and here again moisture is condensed and precipitated, thence onward to the Rocky Mountains and eastward. This brief description of the condensation of moisture over this section and its precipitation in the form of rain, snow, sleet or hail, will give the reader a general idea of the causes of excessive rainfalls west of the Coast range, a less amount between Coast and Cascade Mountains, and still less to the east of the Cascades.



SCENIC EFFECTS—MT. RAINIER.

The climatic conditions of Montana are more under the influence of the general movement of atmospheric disturbances to the east of the Rocky Mountains than to the west of this range, hence for this reason the seasons in Montana are not so marked by wet and dry as they are over Idaho, Washington and Oregon. These wet and dry seasons are not to be taken as such in a literal sense of meaning, but rather in a distinguishing sense, *i. e.*, during the so-called wet season the liability for rain is much greater than it is for fair weather, and contra for the dry season. The causes of these two marked seasons lie in the general movement of the winds, the inclination of the earth and the difference in the amount of heat received from the sun, the amount of heat absorbed or reflected and the amount of heat prevalent in the air.

GIBRALTER AND NISQUALLY GLACIER, MT. RAINIER.

A NEAR APPROACH TO MT. RAINIER.

Due to the change of seasons, the inclination of the earth, during the autumn months the amount of heat received from the sun gradually lessens, hence a cooling of the air. It should be borne in mind that air at a temperature of 50° will hold but one-fourth as much moisture in suspension as it will at a temperature of 100°. With this fact in view, it can be seen that the continuous movement of the moisture-laden air from the ocean meets, in the autumn, a gradual cooling of the air over the land, hence the precipitation begins. As the disturbing causes become more frequent, due to the greater cooling of the air over the land, the precipitation becomes more frequent and heavier, until the maximum cold of winter has passed and the warming of the air of spring begins, With this increased heat, the disturbing causes become less frequent, until in the summer they almost entirely disappear. The winds from the ocean continue during summer, and they have as much moisture in suspension as they had before, but the greater heat of the air over the land allows this moisture to be taken up and absorbed, and not cooled and precipitated as it is in winter. The general movement or circulation of the air is a great factor in the change from the wet to the dry season, but the change is more due to the change in heat than in the change in the winds, though the latter carry great weight in the argument as to the causes of the wet and dry seasons.

There now have been presented the main factors of the climate and its causes. The mechanical resultant of these causes is the climate of this region, a climate which, practically constant as a whole, displays equally constant differences between the several natural districts into which the region is divided. Yet, before proceeding to a more minute description of these various districts, it will be advisable to present a general review of the climatic characteristics which dominate the whole region. The distinguishing characteristic of the climate of the region is, that varieties of weather endure practically unaltered for days at a time, and, even when supplanted by others, return again and again, and on each such recurrence are symmetrical with their former appearance, even when they are not practically identical. In this regard there is a wide variation from the conditions which obtain elsewhere in the United States. Nor is this the only difference. Another notable one is that the storms of the Pacific are with comparative infrequency traced across the Rocky Mountains and the Atlantic slopes Another is that the storm frequently increases rapidly toward the north.

When the area of low barometer of considerable depth overlies Washington and probably is central far to seaward, its movement eastward is checked if not prohibited by the Cascade and Rocky Mountains. Held back by this mountain wall and the equally potent barrier of high barometric pressure eastward, the low pressure is kept beating against these obstacles. While this condition endures, gales occur along the coast and rains occur over most of the region. When, on the other hand, a high area is central over Washington, the low pressure is central over California, fair weather, light winds and an increasing temperature prevail. We have now given in general terms and briefly the causes of the changes in the weather of

PHOTO. BY LA ROCHE.

MT. RAINIER AND LAKE WASHINGTON, SEATTLE.

this region on a general scale. The object of this paper is to give a more minute description of the climate of the region in order that the inquirer or the present citizen can become more familiar with a section whose area is immense, its climate embracing all changes from the sunny clime of Italy to the rigors of an arctic clime; a section that produces every known product of the temperate zone, rich in minerals, fish, wood and natural resources, and possessing qualifications which should and which will entitle it to a population more dense and more prosperous than that which any section of our broad land now possesses.

CAMP PORTLAND NEAR MT. RAINIER.

No single feature with which we come in contact during our existence has such an influence upon our lives, our occupation, our progress and advancement as has the weather. Upon the climate depends everything, hence such an important part of our existence should be thoroughly understood and be familiar to every one. That more attention is being paid to a study of climate, to changes, causes and effects, is evinced by the greater interest displayed in the work of the national weather bureau. It is only through the medium of this organization that we can learn of the climate from a practical or scientific standpoint, and it is by having access to its records and data that this article was made possible. This article is based entirely upon official data, hence is authentic.

Covering 15 degrees of longitude and 10 of latitude, it does not seem so improbable that the region should have such a wide difference in climatic conditions. The marked features of this difference are the precipitation over the extreme northwest section of Washington, at and near Neah Bay amounting to over 100 inches, eight and one-half feet of water, annually, while in portions of Southern Central Washington about Pasco, in Southeastern Oregon and in the central portions of Idaho, less than 10 inches, or less than one foot, of water falls annually. Such is the difference in precipitation in inches. In snowfall along the coast, snow is as much a rarity as it is in the southern sections of those states bordering upon the Gulf of Mexico, while in the Cascade Mountains, on the higher mountains of Idaho and Montana, snow falls to a depth of several feet, and over a large portion of the country to the east of the Cascades, snow covers the ground during the latter part of December, in January and for part of February. This is not true of the immediate Columbia river valley and on the lower plateaus. In temperature as great a difference exists. Along the coast a temperature below 10° above zero has never been recorded, while to the east of the Cascade Mountains temperatures of 10° above and below zero occur every winter. Such an extremely low temperature as 41° below zero was recorded at Helena, Montana, in January, 1880. These extremes are quoted to show the wide range of climatic conditions which exist over this region.

FALLS NEAR MT. RAINIER.

The following statement will give the reader a general idea of the climatic condition prevailing over this section In selecting the stations for which data is given it has been endeavored to select those which give the

most complete type of the climate for their section. The figures given are taken from reports of the United States and Canadian weather bureaus. A few stations distributed over the whole country are included in the table for comparison.

STATIONS	Mean Annual Temperature	Highest Temperature on Record	Lowest Temperature on Record	Average Summer Temperature	Average Winter Temperature	Av'ge Annual Precipitation in Inches
Victoria, B. C	48.5	86	8	58.2	38.0	34.72
Esquimault, B. C	48.8	79	17	58.2	40.0	24.82
New Westminster, B. C.	47.5	90	2	59.7	35.3	62.88
Soda Creek, B. C	41.6	110	-38	66.4	14.9	7.48
Spence's Bridge, B. C.	47.0	102	-14	69.5	22.4	10.17
Olympia, Wash	49.7	97	-2	60.9	42.6	55.98
Spokane, Wash	47.2	102	-30	66.9	27.4	20.08
Walla Walla, Wash	53.7	108	-17	71.8	35.3	17.94
Astoria, Oregon	49.8	88	10	58.7	40.3	75.49
Portland, Oregon	53.4	102	-2	65.7	40.4	49.34
Roseburg, Oregon	53.2	102	-6	64.5	41.6	36.52
Bandon, Oregon	51.8	92	14	57.9	45.9	61.58
Baker City, Oregon	45.6	101	-14	63.1	24.5	14.20
Helena, Mont.	43.3	103	-41	64 4	20.1	12.53
Boise City, Idaho	50.5	106	-28	70.3	31.8	14.30
Washington, D. C	54.7	104	-14	75.2	34.6	44.66
New York City	51.4	100	-6	71.3	33.0	45.47
Boston, Mass.	48.1	101	-13	68.7	28.6	46.42
Chicago, Ills	48.5	100	-23	69.9	27.1	36.00
St. Louis, Mo	55.6	106	-22	76.7	33.4	38.37
New Orleans, La.	69.0	97	15	81.4	56.3	62.94
Denver, Colo	49.3	105	-29	69.6	31.2	14.31
Los Angeles, Cal	61.4	109	28	70.1	54.7	18.38

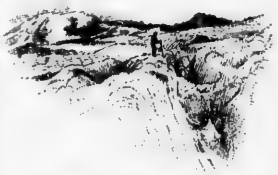
* Figures preceded by the minus sign, indicate temperature below zero.

The mean annual temperature has considerable variation over the section. Soda Creek, in British Columbia, having the lowest mean and next to Helena has the lowest temperature on record for this section. Walla Walla has the highest mean temperature. Portland and Roseburg have nearly as high a temperature. These temperatures are nearly as high as that of Washington City. The extreme temperatures at Walla Walla, having a range of 125°, are much greater than those of Portland or Roseburg. Portland has the highest mean temperature and least range with the highest mean of any station in the district. Bandon, Coos county, Oregon, on the ocean, has the least absolute range of temperature of any station in the district. The mean temperature of all the stations except Helena and Soda Creek is higher than the mean over a great portion of the United States. The mean temperature does not convey the proper information for an agriculturist, hence the highest and lowest temperatures on record, covering a period of ten years or more are given. Along the immediate coast line the maximum temperature is rarely above 85° and has never been as low as zero, temperatures below 10° above zero being very unusual on the coast. In the interior, but to the west of the Cascade range, the extreme summer heat rises to 90° almost every year, and extremes of 102° are on record. Crossing to the east of the Cascade Mountains extremes of 105° and 110° are recorded. Through the major portion of the United States maximum temperatures of 100° are

recorded, and in a great portion of this high summer temperature injurious effects result from the heat, such as prostration, sunstrokes and the like. This depressing effect during the high temperature is due to the increased moisture of the air during the increased heat. Over the entire area of the section under discussion the ill effects of heat are unknown A sunstroke has not been recorded. This difference is due to the fact that with increased heat there is a decrease in the moisture, so that when perspiration is formed on the body the great evaporating power of the air is such as to immediately evaporate the body moisture, thus producing a cooling effect. Then too, the duration of heat is comparatively short in this section, while in the Eastern states the duration of heat frequently extends over a week. This long extension of debilitating heat adds new fuel to the already superheated body and having no relief during the night, there is no cooling or rest for the blood, the result of continued exposure to the heat finally produces prostration with frequently fatal results. In this section the period of warm or hot weather is of short duration, seldom extending over two or three days, and during the continuance of this heat, as at other times, the nights are cool, thus allowing the body to almost entirely recuperate during the period from sunset, when the cooler ocean breezes are experienced, to 10 o'clock A. M. the next day when the heat again begins to be experienced. Over the greater portion of British Columbia, Montana, Idaho, Washington and Oregon a blanket is a comfortable and necessary covering during the night, even during the period of the maximum summer heat. Considering these various conditions it does not seem peculiar that during extreme heat, which in Chicago, St. Louis, New York and other Eastern cities would result in sunstroke, here leads to no great or serious inconvenience or results.

NISQUALLY GLACIER-MT. RAINIER.

Due to the proximity of the ocean and the chain of mountains to the east (the Coast range), that section lying to the west of the Coast range is free from zero temperature, in fact generally free from even freezing temperature. Between the coast and Cascade Mountains, once in the history of meteorological record, has the temperature gone below zero, and that period was in January, 1888, when orange trees were frozen in Southern California and zero temperature occurred in Oregon, Washington and British Columbia. From self-registering instruments at the weather bureau office in Portland, the following data is deduced which will to a great extent be true of the entire country lying between the coast and Cascade Mountains.



GREAT COWLITZ GLACIER-MT. RAINIER.

During the year 1890, at Portland, the temperature was below the freezing point for 529 hours or during 6 per cent. of the hours of the year. In the same year the temperature was above 90° during 11 hours or less than one per cent. of the hours of the year. The non-frost period was from April 15 to October 9. In 1891 the temperature was below the freezing point during 153 hours or during 1.7 per cent. of the hours of the year; it was above 90° during 33 hours or three-tenths of one per cent. of the hours of the year. The non-frost period was from April 11 to November 16. To the east of the Cascades the extreme summer temperature is

higher and winter temperature decidedly colder than to the west of them. The winter temperature is below zero every winter and sinks as low as 41° below at Helena, Montana. Through the immediate Columbia river valley it is seldom lower than 15 or 20 degrees below zero, and this extreme is seldom of long duration. The winter period, during which stock must be fed, seldom exceeds seven or ten weeks, usually six weeks is the utmost limit. To the west of the Cascades wheat has not been known to "winter freeze" while to the east of them it frequently freezes.

COWLITZ GLACIER AND TATOOSH RANGE. MT. RAINIER.

For the purpose of furnishing a general idea of the usual winter and summer temperature the table given above notes these temperatures for the various stations. In summer Walla Walla, with Boise City a close second, has the highest mean temperature, while Bandon has the lowest. The usual summer mean temperature is about 65° for the whole region. In winter at Soda Creek and Spence's Bridge, British Columbia, at Spokane, Baker City, Helena and Boise City, the mean winter temperature is below the freezing point, with the lowest at Soda Creek. The temperature over the greater portion of this section is favorable to the growth of fruit, agricultural and stock products. A careful analysis of the data given in the foregoing table would take many pages, but the gist of it all, so far as temperature is concerned, is here given.

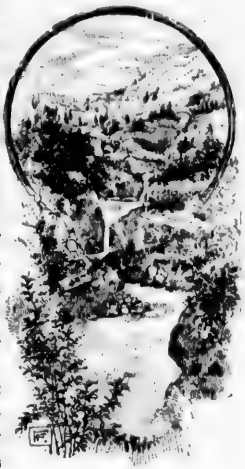
The column on the right in the foregoing table contains the average annual amount of rainfall. The term rainfall includes all forms of precipitation. The heaviest rainfall in the United States occurs at Neah Bay, extreme Northwestern Washington, where it amounts to over 100 inches annually; thence north and southward there is a decrease. At Astoria there are 75 inches; at New Westminster, B. C., there are 63 inches. Along the immediate coast it amounts to over 60 inches, or five feet, annually. In the interior there are many local variations, but generally speaking, from Puget Sound, north and south, there is a decrease. Olympia has 56 inches annually, Victoria 35 inches, Portland 49 inches, while in the southern portion of Oregon it is but 22 inches. To the east of the Cascades it varies from 7 to 20 inches. In this section about one-third the annual amount occurs in the form of snow, while to the west snowfall does not form over 5 per cent of the annual total, and in years not 1 per cent. The generally received opinion is that the heavy rainfall along the coast sections extends over the major portion of this section, while it is a fact that excessive rain does not extend over 3 per cent of the country. Again, on the other hand, it has been represented that to the east of the Cascades the country is almost rainless. The statement is absurd on the face of it. The annual rainfall occurs principally from December 1 to March 1, where, save to the east of the Cascades, 65 per cent of the rain occurs. The area over which there is less than

PHOTO. BY B. B. DOBBS, NEW WHATCOM.

GREAT NORTH GLACIER, MT. BAKER, AT 6000 FEET.

10 inches of rainfall does not cover 10 per cent of the entire region. Over this area the precipitation during the dry season is about one-fifth of what it is during the wet season, showing a quite general distribution of moisture throughout the year. It follows from such a distribution of rainfall that it is more beneficial to agricultural operations and more fruitful than in those sections where summer rains and storms do so much damage to the harvested crops. This entire section is favored with a climate of unusual mildness. While the immediate coast regions have very heavy rainfalls, yet such rain occurs during the winter months of December to March, and in all cases the wet season gives way gradually to the dry season during July and August. While the prepondering amount of rain falls during the winter, yet the spring, early summer and late fall are marked by moderate rains at not infrequent intervals.

PHOTO. BY FRENCH.



WATER FALL NEAR MT. BAKER, WASH.

From a perusal of the foregoing the general climatic condition of this region can be understood, and the relation of the climatic condition to health will now be briefly discussed. As has been shown, the atmospheric changes of this region are more uniform and of minor range, when compared with the great portion of the United States. This absence of disturbing meteorological forces, as indicated by the narrow range of barometric and thermometric oscillation, is sufficient to account for the freedom here from epidemics caused by atmospheric influences, and especially the absence of those atmospheric conditions favorable to the development of bacteria and all cryptoganic and sporadic germs, and on account of the divers currents of air mingling with the breezes from the mild Pacific, contagious and epidemic diseases are easily controlled, while such diseases as typhus and cholera are entirely unknown, and even typhoid forms of malaria are quite easily controlled, when compared with the same class of diseases in the climate of the Atlantic seaboard. The climate west of the Cascades is generally too damp for consumptives, but on the plateaus east of this range it is the best climate for them in the world. Atmospheric causes of disease reside chiefly in the varieties of atmospheric changes of moisture and temperature, sudden changes in temperature, excessive moisture or dryness, different electric conditions, or a deficiency of sunshine. The atmosphere may be a source of disease in consequence of its being loaded with impurities, malaria, contagions of various kinds, and noxious gases in general, and an endless variety of septic germs. The range of atmospheric temperature compatible with human life is very considerable. Its limits are probably just those extremes of heat and cold that belong to the lower strata of air in the different parts of the planet on which man is destined to exist. Under the burning sun of the tropics and amid the profound frost of the polar regions are alike found human dwellers. These different degrees of external temperature impose peculiar physical characters upon those who are subjected to them, but they do not of necessity extinguish or even cause disease.

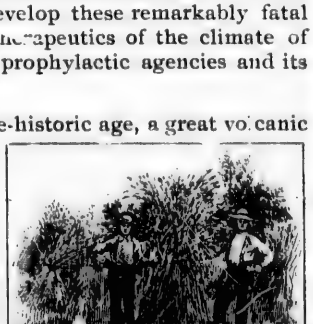
MT. JEFFERSON, OR., FROM GRIZZLY TARN.

It requires more care, however, to preserve life under intense cold than under intense heat. In India and other portions of the tropics the temperature ranges for a long time from 80 to 120 degrees. The mingling of the arctic and tropical atmospheres here combines to produce an anomalous climate singularly free from the severer forms of disease found in either of these zones. The gradual effects of great heat upon the human body operate distinctly as an exciting cause of disease, and give rise to sudden attacks of illness. In the arctic countries, on the other hand, where the sun appears for a short time above the horizon, and where the thermometer sinks to 50 or more degrees below zero, are still found inhabitants, but they are few and thinly scattered, dependent mainly on the scanty supply of food in those parts of the world. Under a degree of temperature a little greater than that of the tropics, or a little less than the lowest of the arctic regions, it seems probable that man would soon perish, and in this fact we have a striking instance of the adaptation of the health-giving properties of a climate free from those extremes of heat and cold.

Closely connected with the effects of temperature upon the health is the influence of the different seasons of the year. It is open to the commonest observation that the general health of the community fluctuates with the changing seasons. Catarrhs, coughs and pectoral complaints of all kinds are apt to commence or grow worse in the winter and spring months, while bowel complaints are more numerous and distressing in the summer months. The mucous membranes of the air passages sympathize with the skin under the agency of extreme cold; those of the stomach and intestines under that of continued heat. The thoracic disorders are more serious and fatal than those of the abdominal. Cholera prevails where the temperature stands at a high degree for a considerable length of time, and proves fatal where cholera germs luxuriate in a hot and unchanging atmosphere. The climate of this region is entirely free from this disease, for the simple reason that the germs of this particular form of disease cannot flourish in this mild antiseptic climate, with its ever changing currents of air drawn from the mild Pacific and mixed daily with the gentle breezes from the tablelands of the adjacent coast. Sunstroke, yellow fever and the like are unknown in all this region, for the reason that the mild, warm days are followed by refreshingly cool nights, which make the climate destructive to the germs which live in continuously hot localities and develop these remarkably fatal maladies. And so it seems quite conclusive that the therapeutics of the climate of this region is remarkable in its effects both as to its prophylactic agencies and its curative effects on all diseases peculiar to our race.

Soils of the Pacific Northwest.—In a pre-historic age, a great volcanic outburst covered the principal part of Oregon, Washington and Idaho with a sea of molten lava, effectually destroying every vestige of vegetable and animal life. This volcanic stone covered an area of 200,000 square miles to a depth of over 2,000 feet. It is this lava, crumbled by mechanical action and by the elements to an impalpable powder, mixed with the accumulations of years of decaying vegetation, that now forms much of the soil of these states.

Generally, it may be tated that in no part of the world is the soil more productive or lasting than are the soils of the best lands of the Pacific Northwest.



TALL WHEAT RAISED IN WILLAMETTE VALLEY, OR.

18TH SUCCESSIVE CROP OF OATS, KLAMATH CO., OR.

This is fully borne out by the expressed opinions of the most eminent geologists and chemists. There is as great a diversity of soils in the states comprising the region covered by "The Handbook" as there is a diversity of climate in this part of the United States. The soil of each division of this region possesses peculiarities distinctively its own. There is but little difference, however, in the wonderful productive power of the various soils of the Northwest. Every semi-tropical fruit and all vegetation indigenous to the temperate zone can be successfully grown on this soil. In the great number of different articles in "The Handbook" on the different localities of this region, will be found a full description of the diversity and extent of crops that are grown successfully in their respective localities. The general characteristics of the soils of the different parts of the Northwest are worthy of some mention in the present article, and it is these general features which will command attention here, the special characteristics of the lands of the Pacific Northwest being reserved for mention in the subsequent articles of "The Handbook" on the different localities of this section.

In Western and Southern Oregon the soil of the bottom lands of the valleys is a rich black loam of great fertility. The Willamette, the largest of these valleys, was at one time covered by a detached part of the ocean, something like Puget Sound is today. The soil of the flat lands of the Willamette valley is the sediment of a very fine silt cast into the waters of this pre-historic sound. Generally, the soil in this part of Oregon is made up of disintegrated basaltic rock, washed down from the adjacent hills, alluvial deposits and decomposed vegetable matter. The hill soils are less fertile than are the soils of the low lands, and are of a dark brown color, friable and fine. The Willamette valley is, in some respects, the most remarkable part of the state, and it comprises one of the most productive agricultural sections of the Union. South of the Willamette valley are the valleys of the Umpqua and Rogue river, both of which possess soils similar to the soils of the Willamette valley.

East of the Cascade Mountains the fertility of the soil and its prolific production of all vegetation are due to the prevalence of lava ash and decomposed basaltic rock, which it contains. The great cliffs and heaps of basaltic rock that are so often noted in this region contain nearly all the ingredients which constitute the most important elements of vegetable life. The soils of volcanic origin are the most productive and lasting of all soils. Contrary to popular belief, basaltic rocks are fragile and short lived. All over Eastern Oregon, Eastern Washington and Idaho the basalt, by a mechanical breaking down, accompanied by erosion from water and a process of chemical decomposition, is even today building up fertile acres and adding to the productive resources of land that has already astonished the world with its enor-

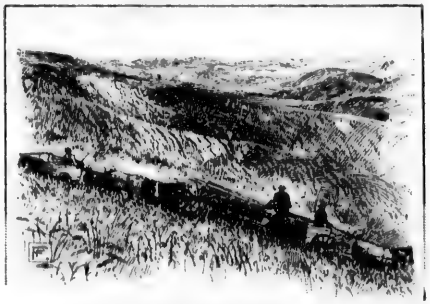
FARM SCENE, EASTERN WASHINGTON.

TALL OATS, MEDICAL LAKE, WASH.

mous yields of cereals. It is highly probable that on no other lands than the volcanic ash fields of the Pacific Northwest can successive crops be grown without each subsequent year noting some slight diminution of the yield. The lava fields of this region are vast and inexhaustible manure heaps, which insure ample yields of crops for countless years in the future. This land yields, on an average, 30 bushels of wheat to the acre. The lands of the Red River valley, now considered the greatest wheat producing belt in the world, yield less than 14 bushels to the acre. The practical farmer, who has made a study of cereal culture, will appreciate the fact that on the lands east of the Rocky Mountains the continuous raising of wheat on the same land soon wears it out. There are today, in the Willamette valley, farms on which large crops of wheat have been raised during successive seasons for more than 35 years past. The yield of wheat on these lands is as large today as it was during the first few years it was cultivated. The soil of the lands in the Pacific Northwest east of the Cascade Mountains is even more lasting than are soils of the Willamette valley, yet it is doubtful if either of these soils will be found less productive after many future generations have passed away.

The amount of rainfall in Eastern Oregon and Eastern Washington, per year, is generally less than 20 inches. This rainfall, in the eastern part of these states, would not furnish sufficient moisture for the maturing of crops did not the subsoil furnish, during the time when crops are growing, a constant source of moisture for surface vegetation. It is by this sub-surface form of irrigation on the rich lands of the Big Bend and Palouse sections of Washington that it is possible to raise here, each season, the millions of bushels of wheat which Washington now annually produces. The air currents which pass over Eastern Oregon and Eastern Washington during the summer months are charged and surcharged with vapor taken up from the ocean, and this falling on the growing crops at night in the form of dew, insures a form of irrigation in this section not afforded by rain.

The soil of the lands in the valleys tributary to Puget Sound is a rich alluvium which will meet the draft of centuries of constant tillage. This soil is of great, even of unknown depths. At the bottom of a well 144 feet deep in one of these valleys, an alluvial deposit was found fully as rich as the soil on the surface. At a depth of 80 feet in this well, a tree four feet in diameter was encountered, and for the whole depth signs of vegetation were found, thus evidencing the gradual building up of this soil by ages of decaying matter. The enormous crops raised on the lands of the valleys of the Puget Sound section are almost beyond the belief of the Eastern farmer. It might be mentioned here that wheat cannot be successfully grown on these lands owing to the excessive moisture the air contains during the time the grain is



FARM SCENE NEAR WALLA WALLA, WASH.

ripening. As in the other parts of the Northwest, the country surrounding Puget Sound contains a wide diversity of soils. The uplands are not as fertile as the valleys, but the soils of these higher lands here if found in the East would be considered rich agricultural land. Upwards of 45,000 acres of tide lands in this section have been reclaimed by diking. The soil of this reclaimed land is rich, black and of great fertility. It is unexcelled as a producer of certain cereals and of all kinds of vegetables.

CAMPING, TWO MEDICINE CREEK, MONTANA.

The soil of the 25,000,000 acres of Eastern Washington drained by the Columbia river and its branches is made up of decomposed lava. It does not differ from the soil of Eastern Oregon. This soil is abundantly supplied with potash and other elements essential to the highest development of cereal production. The soil is of a fine texture and in color it is a light gray which darkens slightly on exposure to moisture. The basin of the Columbia river was at one time a vast inland sea. In the smaller valleys near the mountains that surround this basin are rich alluvial deposits of great depth. Where the Columbia river makes its great cut through this basin the lava beds show a depth of nearly 2,600 feet. From the summit of these beds of lava a broad plateau stretches away to the east for a distance of nearly 150 miles. This comprises the great grain producing region known as the Big Bend and Palouse sections of Eastern Washington and the Potlatch district of Idaho. Some parts of this great plateau are covered here and there with great unsightly piles of basaltic rock which when seen from the passing cars, convey the impression of an unproductive section of country. The soils of the Big Bend and Palouse sections, however, are perhaps the richest on the coast, and this is today the greatest wheat-producing region of the West.

The soil of the lands of Northern Idaho is in many respects similar to that of the lands of the adjacent country in Washington. In the valleys and on the plateau of the eastern and southern parts of Idaho the soil is composed of vegetable matter mixed with mineral, and in some localities of this region with sand and clay. In the southern half of the state irrigation is generally necessary to insure the perfect growth of crops.

The soils of Montana, unlike those of the states lying to the west, are not of volcanic origin. The soils of the valleys and bunch grass lands of Montana were formed by the disintegration of mountain rocks and by the slow accumulations of decomposed

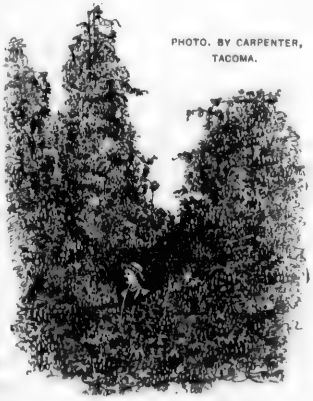


PHOTO. BY CARPENTER, TACOMA.

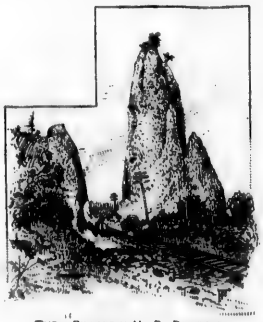
GROWING HOPS, YAKIMA VALLEY, WASH

PHOTO BY A. J. MERWIN.

TROUT STREAM NEAR MONTESANO, WASH.

organic matter. The valleys of the state are exceedingly fertile and produce cereals, hay, vegetables and fruit. In the Flathead and Bitter Root valleys, lying in Montana on the Pacific side of the Rocky Mountains, fruit is successfully grown. Of the lands in the state east of the Main Divide of the Rocky Mountains only small areas can be cultivated without the aid of irrigation. This land produces abundant crops of wheat and other cereals.

In the Yakima valley and in Franklin and Adams counties in Eastern Washington crops cannot be grown without the aid of irrigation. The Yakima valley, in its natural state, is a sage brush desert. Large areas of this valley are now covered with fruit trees, hop yards and fields of alfalfa. All the arable land in Oregon or Washington suitable for agriculture can be irrigated at a comparatively small expense. Irrigation in Oregon is confined to a small area included in a few counties east of the Cascade range of mountains. In this part of the state there still remain large tracts of government land which, when irrigated, are as productive as any of the best land now under cultivation in this section. The average cost of preparing arable land for cultivation in the districts where irrigation is necessary is about $15 per acre. The average cost per acre in bringing water to this land is estimated at $5. This with the purchase price of $1.25 an acre from the government, and the cost of $15 per acre for preparing the land for cultivation, makes the total cost of this land when fully planted $21.25 per acre. The average annual expense of water for irrigating this land after it has once been planted is 94 cents per acre.

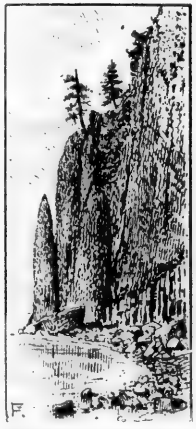


THE "PILLARS," U. P. RAILROAD. COLUMBIA RIVER.

The average value of irrigated land in this section when once cultivated is $57 per acre. These figures are given merely as averages, and they do not represent the cost of reclaiming land in any particular locality of the irrigated belt. In some counties of Oregon the first cost of conducing water to arid lands is as high as $20 per acre, while in other parts of the arid belt the cost of conveying water for irrigation is as low as $1.25 an acre. Statistics bear out the statement that when a tract of arid land has once been brought under cultivation its value increases fully 100 per cent. over the cost of reclaiming it. This great increase of value in irrigated lands and the possibilities of irrigation here have attracted the attention of thoughtful men and capitalists to the future of irrigation in the arid parts of the Northwest,

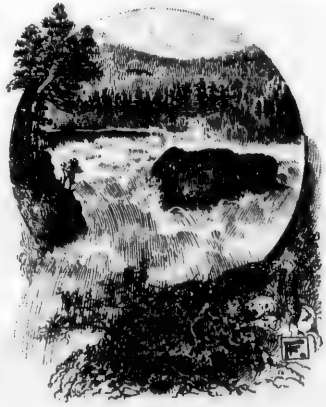
and active steps have already been taken to reclaim thousands of acres of land in Eastern Washington and Idaho by digging ditches and conducting water in sufficient quantities to insure ample crops on this land in all seasons.

Rivers and Harbors of the Pacific Northwest.—The Pacific Northwest contains several great navigable rivers, innumerable rivulets, and a score or more of beautiful Alpine lakes and a series of magnificent harbors. It also boasts of an incomparable inland sea which offers the finest harbor for shipping in the world.



CAPE HORN, COLUMBIA RIVER.

Through this vast region, and draining an area of no less than 298,000 miles, flows the Columbia river, one of the greatest watercourses of the continent. The Columbia river rises among the Rocky Mountains, in a wild and romantic part of British Columbia. Its course for 1,020 miles lies through British Columbia, the states of Washington and Oregon, to the Pacific ocean at Astoria. From its source it first flows in a northerly direction. After receiving the waters of Canoe river it describes a sharp turn and then flows in its southerly course towards the ocean. Below the line of the Canadian Pacific railway it expands, forming the Arrow Lakes, two beautiful mountain-walled sheets of water. At Robson, 40 miles north of the international boundary line, it receives the waters of the Kootenay river. This latter stream, from its mouth to the Kootenay Lake, a distance of 28 miles, is a surging and foaming torrent, which makes three distinct falls over huge ledges of rocks. This river rises among the mountains of East Kootenay, and in reaching Kootenay Lake it describes a semi-circle, flowing successively through Montana territory, thence into Idaho, and then back again into British Columbia. A peculiarity of this stream is that near its source it flows due south, while over a low divide, only five miles away, the Columbia river winds its way northward. From Kootenay Lake, a beautiful sheet of water, hemmed in by mountains 6,000 feet high, the Kootenay river is navigable to Bonner's Ferry, Idaho, a station on the line of the Great Northern railway. From Bonner's Ferry to Jennings, Montana, a distance of 62 miles, obstructions prevent navigation. At Kootenay station the river begins a rapid descent, and in this fall two great cataracts are formed. From Jennings, on the river, a line of boats plies to East Kootenay, which is separated from Kootenay Lake, in the west division of the province, by the Purcell range of mountains.



ST. AGNES FALLS, KOOTENAY RIVER, B. C.

At Fort Sheperd, an old abandoned post of the Hudson's Bay Company, just north of the American boundary, the great Clark's Fork pours its waters into the Columbia river. Clark's Fork rises among the mountains, near Butte, Montana.

It is first known as Silver Bow creek, then successively as the Deer Lodge, Hell Gate, Missoula, Clark's Fork of the Columbia, and finally as the Pend d'Oreille river. It is navigable, for broken distances, through Idaho.

Crossing the international boundary line the Columbia river pursues its southerly course, receiving numerous small streams along its course before it is finally joined by the Spokane river. This latter stream is the outlet of Lake Cœur d' Alene, Idaho, and is not navigable. After receiving the waters of the Spokane, the Columbia turns nearly due west, forming what is known as the Big Bend of the Columbia. The river winds here around the foot of basalt cliffs 2,000 feet high. From the summit of these cliffs a broad plateau stretches away southward for about 150 miles. This plateau is the famous wheat-producing section known as the Big Bend country of Washington. After flowing south for a distance of 214 miles from the international boundary, the Columbia is joined by the Okanogan river, which flows from the lake of the same name in British Columbia. This stream is navigable for about 40 miles from its mouth. Between the boundary and the mouth of the Okanogan river the Columbia falls 524.4 feet, being an average fall of 2.5 feet to the mile. The average velocity of the surface flow over this course is 3.48 miles per hour. After passing the Okanogan the next streams which add their waters to those of the Columbia are the Methow, Chelan, Entritow, Wenatchee and the Yakima.

GLIMPSE OF KOOTENAY LAKE, B. C.

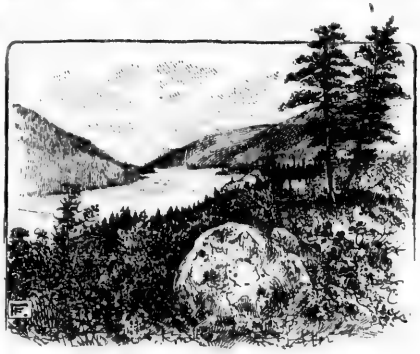
A boat now runs from Rock Rapids, on the Columbia river, to the mouth of the Okanogan river, a distance of about 80 miles. Rock Rapids is a station on the line of the Great Northern railway. The part of the Columbia from the head of Rock Island rapids to the foot of Priest rapids covers a distance of about 60 miles. These two rapids and Cabinet rapids are the principal obstructions to navigation along this part of the Columbia. At Rock Island rapids the river has a fall of 12½ feet over a distance of 8,000 feet, and it falls 10 feet in 8,000 feet of its course at Cabinet rapids.

PHOTO. BY NULANDS BROS., NELSON.

BIG FALLS, KOOTENAY RIVER, LINE COL. R. & KOOTENAY RY.

At Priest rapids there are seven principal rapids, extending over a distance of 10 miles. Between the little dalles and Priest rapids are many obstructions which interfere with continuous navigation. These consist principally of rapids which, however, can be overcome if Congress will appropriate sufficient money to insure navigation through them. The total fall of the river over Priest rapids, at low water, is 72 feet, and at high water 63½ feet. Boats can now, at certain stages of the water, pass over

all of these rapids, though "lining up" is usually necessary to allow a boat to pass up the river here. Priest and Rock Island rapids will always be difficult places in the river for boats to pass until either systems of locks or boat railways around these dangerous rapids are built. When the improvements around the cascades of the Columbia are finished and the dalles shall be successfully passed and the upper rapids of the Columbia are improved, Portland will enjoy uninterrupted water communication with the wheat fields of the Big Bend and Palouse wheat-producing sections of Washington, as well as with the mines of the Chelan and Okanogan mining districts. Just south of Pasco, a station on the line of the Northern Pacific, the Columbia is joined by its great southern fork, the Snake, in many respects a greater stream than even the Columbia itself. The Snake is one of the wonderful rivers of the West. It derives its name from its extremely tortuous course. It carries a sufficient volume of water to float steamers 1,000 miles or more from its mouth, but owing to numerous obstructions to navigation it is not practicable to continue navigation above Lewiston, Idaho. Steamers have plied on this stream, however, to within 150 miles of Great Salt Lake, and even today parts of the river are navigated regularly for a considerable distance east of Huntington, a station near the boundary line between Oregon and Idaho.



VIEW ON ARROW LAKE, COLUMBIA RIVER.

The aggregate appropriations by the government for the improvement of the Snake and Upper Columbia rivers have been $271,000, of which amount $162,965 was expended prior to June, 1893. By the terms of the river and harbor bill of July, 1892, the upper limits of work under this head were extended from Lewiston, Idaho, to Asotin, Wash., a distance of seven miles. The Snake is now regularly navigated between Riparia, on the Washington division of the Union Pacific railroad, and Lewiston, Idaho, a distance of 77 miles. For the fiscal year ending June 1, 1893, the three steamers plying on this route carried 19,364 tons of freight, the estimated value of which was $605,910.

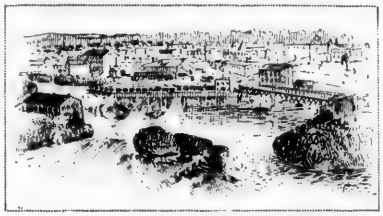
The Snake is one of the longest of Western rivers. It rises among the wonderful scenic country of the Yellowstone National Park. It winds among the hills and plains of Idaho for nearly 800 miles. Twenty-five miles from Shoshone, a station on the line of the Union Pacific railroad, the river forms Shoshone falls, next to Niagara the most imposing waterfall in America. Before entering Washington and emptying into the Columbia, the Snake separates a part of Idaho from Oregon, being the boundary line between these two states for this distance. The Columbia and Snake rivers form a continuous line of navigable water from Celilo, at the head of the dalles, to Lewiston, Idaho. The only part of this stretch of river now navigated, however, is the Snake from Riparia to Lewiston, a distance of 77 miles. The

CLARKS FORK, COLUMBIA RIVER.

Snake, at certain stages of water, is navigable for 300 miles above its junction with the Columbia and for 200 miles in the heart of Idaho.

The Salmon, Boise, Payette, Weiser and Wood rivers drain Central and Southern Idaho. All these streams flow into the Snake from the north. The Clearwater, a blue mountain stream rising in the Bitter Root Mountains and navigable for a few miles from its mouth, joins the Snake at Lewiston. The Powder and Grand Ronde rivers, swift flowing streams, watering large areas of fertile valley lands lying in Oregon, contribute their waters to the Snake as it winds its way along the Oregon boundary. Just as the Snake strikes the boundary line it receives the waters of the Malheur river which, rising in Nevada, flows northward for a distance of 500 miles, watering along its course an important section of country.

When boats shall be able to run from Portland to Celilo, the Columbia and Snake rivers will furnish a most important system of water communication with the interior. This water course will furnish an outlet for the great grain districts of Eastern Oregon, Washington and Idaho.



WATER POWER, SPOKANE, WASH.

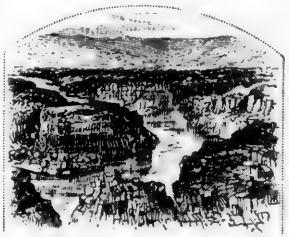
The Columbia, after it is joined by the Snake, receives the waters of the Walla Walla, Umatilla, John Day and Des Chutes rivers, as well as the waters of several smaller streams. Of the numerous small rivers which empty into the Columbia between the mouth of the Willamette river and the sea, and the most important, is the Cowlitz. In the early history of Washington, the course of the Cowlitz was the route generally followed by people traveling overland between Portland and Puget Sound. The Cowlitz river is navigable for small steamboats for a distance of 50 miles from its mouth. The government has appropriated for its improvement sums aggregating $22,000. Nearly all of this money has been expended in removing sand bars, snags, rocks and other obstructions from the channel of the river.

The distance by river from Priest rapids to the ocean is 409 miles. All of this stretch of the river is navigable except a short distance of about 20 miles. At Celilo, 275 miles below Priest rapids and 124 miles east of Portland, commences a series of rapids which are about 14 miles long. A short distance above The Dalles is a gorge of the Columbia called the dalles. The chasm occupies two and one-half miles out of the 14 miles of the course of the river between Celilo and The Dalles. The river above the gorge is from 2,000 to 2,500 feet wide, and at its highest state it even covers a stretch of a mile wide. For two and one-half miles through the gorge, however, the great body of the stream is compressed into a narrow cleft about 130 feet across. During a June freshet the water has been known to rise in this gorge 126 feet. It is expected that Congress will make an appropriation for the building of a ship railroad around the dalles as this is the easiest way to carry boats over these dangerous rapids.

RAPIDS, COLUMBIA RIVER ABOVE THE DALLES.

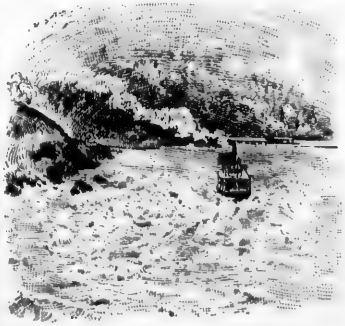
This improvement is demanded by the interests of a vast country adjacent to the Columbia river above The Dalles, and the magnitude of the interests of this section well justifies the expenditure of the small sum necessary for the construction of the ship railroad referred to.

About 20 miles below The Dalles the gorge proper of the Cascade mountains through which the Columbia flows, is reached. Thirty miles farther down the stream are the cascades of the Columbia. Here the river bed is filled with gigantic boulders and huge mis-shapen stones, and for a distance of six miles here the mighty stream lashes itself into a fury over these obstructions. Congress has already appropriated $3,553,403 for the improvement of the cascades here. The first appropriation for this work was made in 1877, about which time work was commenced on the system of canal and locks around these rapids. The work was delayed from time to time, however, by the lack of money. In July, 1892, and in March, 1893, Congress made appropriations aggregating $1,665,903 for the completion of the improvements at this point. The general scope of these improvements includes a complete system of canal and locks and improvements to the stream extending over a distance of four and one-half miles. The fall of the river in this distance is about 45 feet at high water and 36 feet at low water. The principal obstruction to navigation here occurs at the upper end of the reach known as the upper cascades. The project for the improvements contemplates that the river shall be improved below the upper cascades by removing boulders and projecting points in the bed and banks so as to give good, navigable water from its lowest up to a 20 foot stage. The fall at the upper cascades is to be overcome by digging a canal 3,000 feet in length across the neck of a low, projecting spur around which the river is forced at the entrance to the gorge, and placing in this a lock and other suitable structures which would permit the passage of boats up to a 20 foot stage; this lock and canal to be so arranged that should the future necessities of commerce so demand, additional structures may be added which will make navigation practicable here at a much higher stage of the river.



GORGE ABOVE THE DALLES COLUMBIA RIVER.

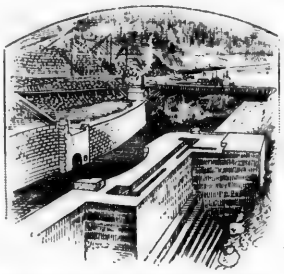
The first part of this vast project, that of improving the river below the foot of the upper cascades is finished. The difference of level between the head and foot of the canal as now established is 15 feet at high water and 24 feet at low water, and the difference in height between high and low water at the foot is 54 feet, and at the head 45 feet. The plan on which work on the canal with its locks and accessions is now being prosecuted has for its object the improvement of the river to a point where it will be navigable here as before stated up to a stage of 20 feet. These improvements it is now contemplated will be completed by the end of 1894. This will give an unobstructed



STEAMER HARVEST QUEEN RUNNING THE RAPIDS AT THE CASCADES OF THE COLUMBIA RIVER.

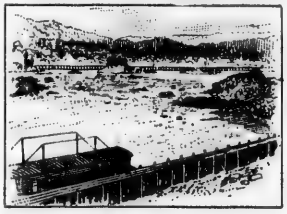
waterway for light draft ocean vessels and river craft from the mouth of the Columbia to The Dalles, a distance of about 200 miles.

Fifty-three miles below the Cascade locks and 12 miles distant from Portland, the Columbia is joined by the Willamette river, its most important tributary. On the Willamette between Portland and the Columbia river the largest ocean steamers and sailing vessels ply at all seasons with safety. The Willamette and Lower Columbia rivers float an export commerce valued at $17,000,000 annually. A myriad of steamboats navigate the river here, and hundreds of vessels hailing from all parts of the world sail over its waters. From Portland to the ocean is a channel of a mean depth of 22½ feet at the very lowest stage of water. The improvement of this stretch of river is largely due to the efforts of the citizens of Portland who have accomplished work, and expended large sums of money which should have been done by the general government. In the Columbia below the mouth of the Willamette the formation of sand bars at five or six places formerly seriously interfered with the successful navigation at these places. To remove these bars small appropriations were made by the general government, but these appropriations were totally inadequate to accomplish more than temporary relief. The work done by Portland in overcoming these bars has been of a permanent nature, and it has been clearly demonstrated as the result of this work that a channel of even 30 feet depth at the lowest stages of the river can successfully be maintained from Portland to the sea.



CONSTRUCTION WORK-CASCADE LOCKS, OREGON.

At its mouth the Columbia river is eight miles wide. Here it is really an estuary of the ocean. Accumulations of sand, washed in by the ocean and carried down by the river, formed what was formerly known as the Columbia river bar. This bar interfered seriously with navigation. Before it was removed, large vessels could only cross over it at high tide. A plan was elaborated for providing a channel across this bar having a depth of 30 feet at mean low tide. The first appropriation for this work was made by Congress in 1884. The total amount appropriated for this work to the end of the fiscal year of June 30, 1893, was $1,687,500. The amount of this appropriation expended has been $1,540,413, leaving a balance of $147,087 still available for the prosecution of the work. The work of improving the mouth of the Columbia river, however, is now substantially finished. The main part of the channel at the entrance is now 30 feet deep at low tide. For one mile of the width of the channel the lowest depth is 27 feet, and for a distance of two miles the lowest depth is 25 feet. The largest vessels now pass into the river from the ocean with safety and without delay on account of tides.



COLUMBIA RIVER RAPIDS AT CASCADES, SHOWING STATE PORTAGE ROAD.

As early as 1877 the government began the work of improving the Columbia and Willamette rivers from Portland to the sea. The object of these improvements was to make and maintain a navigable channel having a low water depth of 25 feet from Portland to the sea. The amount expended by the government on this work to the fiscal year ending

June 30, 1893, was $775,138.58. This sum was appropriated at different times and the work of the government in the improvement has been carried on very slowly.

MOUTH OF COLUMBIA RIVER.

At the close of 1890 it became apparent that considerable additional improvements must be made to the rivers between Portland and the ocean, and that this work must be accomplished in less time than it was possible to secure an appropriation from the government for finishing it. Arriving at this conclusion, the citizens of Portland applied to the state legislature of the session of 1890-91 for authority to issue bonds to complete this work of improving the rivers from Portland to the mouth of the Columbia. As a result of this petition, the legislature passed an act, February 16, 1891, creating a corporation under the title of the Port of Portland. This comprised 15 representative citizens of Portland, and it was formed in the nature of a municipal corporation. About 90 per cent. of Multnomah county is embraced within its limits, and it is vested with authority to issue bonds to the extent of $500,000, and to levy taxes to meet the interest on the bonds and to retire them at their maturity. Work was commenced under the direction of this corporation in December, 1891. Since that time it has constructed 43,000 lineal feet of diking at several points on the Willamette and Columbia rivers where it was necessary to narrow the channel to increase the depth of water. This, together with a considerable expenditure for dredging, has already secured between Portland and the sea a channel, at the lowest water, of 22½ feet. This channel, with the natural erosions, is expected to attain a depth of 26 or even 30 feet with little further expenditure. This result has been reached by using the proceeds of $300,000 in bonds and $125,000 raised by direct taxation. The action of the citizens of Portland in thus spending nearly half a million dollars in improving a government water course is unprecedented. The exigency of the situation, however, induced them to undertake that which they had a right to expect was a work the government ought to do. With these improvements the Columbia and Willamette rivers will hereafter have a channel of sufficient depth for the passage between Portland and the ocean of all vessels likely to visit these waters.

WORKING ON JETTY - MOUTH COLUMBIA RIVER.

From the mouth of the Willamette to the Cascade Locks, the Columbia affords free navigation for vessels drawing from 10 to 12 feet of water. The Columbia is the only river in the United States navigable for deep water vessels for 120 miles inland from its mouth. Tide ascends the Columbia river to the Cascades, and on the Willamette the river is affected by tides to the Willamette falls, 12 miles south of Portland.

The Willamette river is formed in Lane county, Oregon, by the uniting of several small streams which have their source in the Cascade Mountains. The Willamette flows in a northerly direction, midway between the Coast and Cascade ranges of mountains, and it waters one of the most fertile and beautiful valleys in America. Forty-two large and small streams empty into the Willamette. It is unobstructed by falls, rapids or rocks, except at Oregon City, 12 miles south of Portland. At this

point the great river flows over a solid rock dam 3,000 feet wide and 42 feet high forming the Willamette falls. Boats pass these falls by a system of locks, owned by the Portland General Electric Company. These locks are now being widened from 40 to 120 feet, at a cost of nearly $1,000,000. By the use of the locks, the river is navigable for the largest river boats to Corvallis, 96 miles south of Portland, and, during favorable stages of water, boats ascend the river as far as Eugene, 130 miles south of Portland. It is estimated that, at a light cost, the Willamette river can be made navigable between Portland and Eugene throughout the year.

GOVERNMENT JETTY-MOUTH COLUMBIA RIVER.

Of the numerous streams which empty into the Pacific ocean along the Oregon coast, a few are navigable for distances varying from 40 to 70 miles. The entrances to all of these rivers are obstructed by sand bars. Where the Siuslaw empties into the ocean there is a vast, shifting sandy beach, without any headland to determine the location of the entrance channel. The improvements projected by the government at the mouth of the Siuslaw are the building of two jetties, one 4,500 feet and the other 3,000 feet in length. Congress has already appropriated $100,000 for this work. The work accomplished here so far has been properly of a preliminary nature only. The depth of water on the Siuslaw bar, at the entrance, now varies from 5 to 12 feet at low tide, and the bar channel changes much in position and direction at different times, owing to shifting sands.

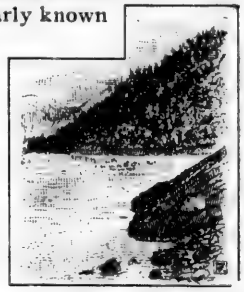
The Umpqua river rises among the Cascade Mountains of Douglas County and flows through a picturesque and exceedingly fertile valley. This stream is frequented by light draft coasting vessels. It is navigable from its mouth to Scottsburg, a distance of about 20 miles. The bar, at the entrance of the river, is covered to a depth of 10 feet at low tide. Appropriations for the improvement of the channel of this river now aggregate $33,500.

COLUMBIA RIVER NEAR THE CASCADES.

The Coquille river flows from the Coast range of mountains, through Coos county, to the ocean. It is navigable for 40 miles above its mouth. About $105,000 has been expended in improving the channel of this river and on its entrance from the ocean. At low water, the bar at the mouth of the Coquille is covered to a depth varying from 4 to 12 feet. The projected improvements here consist of extending and strengthening the jetties already built, which will result, it is believed, in maintaining a depth of at least eight feet of water over the bar at low tide.

The Rogue river rises in the heart of the Cascade Mountains, near Crater Lake. This lake is one of the most remarkable sheets of fresh water in the world. It is at an altitude of 6,500 feet above sea level, and rests in the crater of an extinct volcano. It is eight miles long by six miles in width, and is estimated to be 1,996 feet deep. It is surrounded by walls rising vertically to a height of from 1,000 to 2,000 feet. The Rogue river leaves the mountains and, in flowing to the ocean, winds through a beautiful and well settled valley contained in the counties of Jackson, Josephine and Curry. It is navigable only a few miles above its mouth.

Of all the beautiful bodies of salt water and safe harbors in the world, none can compare with the great inland sea popularly known as Puget Sound. The irregular contour of its densely timbered shore line and the deep blue of its island-dotted waters, the great snow peaks that lift their battlements thousands of feet above its surface, and the remarkable cities along its shores, combine to make it one of the most picturesque spots in America. No storm ever lashes its waters into fury dangerous to shipping, and its surface is at all times as placid as is the surface of any great river of the continent.



GORGE AT THE CASCADES—COLUMBIA RIVER.

On Puget Sound, the shipping of the world can come and ride at anchor in safety. From the time the first bark sailed through the Straits of Fuca into the broad and deep channel of Admiralty Inlet, there is no record of a storm having sent a vessel to the bottom of Puget Sound. As a consequence, maritime insurance on shipping frequenting Puget Sound is at the lowest rate made for vessels plying any waters.

Puget Sound is an aggregation of land-locked bays and inlets, each enjoying a distinctive name. Its shore-line is over 1,800 miles in length, and in many places the shore rises so abruptly from the water's edge that a boat would run its prow into the bank without grounding. The waters of the sound cover an area of 2,000 square miles. From Cape Flattery the Straits of Fuca extend inland for about 50 miles. Down these straits sail vessels hailing from all parts of the world. The center of these straits is the boundary line between Vancouver Island, British Columbia and the state of Washington to the south. Extending south through Washington from the Straits of Fuca is Admiralty Inlet, the most important subdivision of Puget Sound. Hood's Canal extends from near the mouth of Admiralty Inlet, from which it is separated by a peninsula comprising Kitsap county, for many miles southward.

Seattle and Tacoma, the two great seaports of Washington, are located in indentations of Admiralty Inlet. South of Tacoma, and at the extreme inland end of Puget Sound, is Olympia, the state capital. Olympia is located on the shores of Budd's Inlet, another indentation of the sound. Along the entire course of Admiralty Inlet are numerous fine bays affording safe anchorage for the deepest vessels. These bays are frequented by numerous steamers and sailing vessels, and thousands of craft ply regularly on the broad bosom of the great channels and inlets forming what is known as Puget Sound.

North from the Straits of Fuca, and directly opposite Vancouver Island, is Bellingham Bay, one of the finest harbors of Puget Sound. It is on Bellingham Bay that the prosperous cities of Fairhaven and New Whatcom are located. From above this bay the Gulf of Georgia separates the mainland of British Columbia from Vancouver Island. The northwest navigable outlet of the Gulf of Georgia is Discovery Passage. This is the route taken by the steamers plying between Seattle, Tacoma and Alaska. The distance between Sitka and Tacoma is 1,378 miles. With the excep-

STEAMBOATING, PUGET SOUND.

tion of a few miles of the distance between these two ports the route lies wholly between islands and the mainland, where the water is as smooth as any river course.

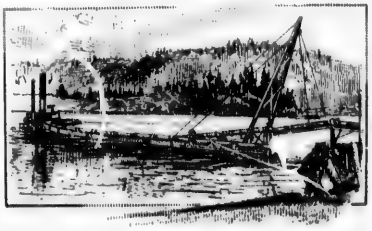
Of the numerous rivers and small streams which empty into Puget Sound, the largest are the Nisqually, Puyallup, Duwamish, White, Summanish, Snohomish, Snoqualmie, Stilaguamish, Skagit, Samish and Nooksack. Steamers ply the waters of all these streams. The largest of these rivers is the Skagit, which is navigable for 80 miles above its mouth. In entering the sound it forms an extended delta. This is principally composed of tidal marshes, which have been reclaimed by diking, and which now possess an almost fabulous fertility. Near the mouth of the Skagit is that part of Puget Sound known as Saratoga Passage, which is connected with Padillo Bay by Swinomish Slough. This slough will be made navigable for vessels drawing 8 and 10 feet of water, and will thus lessen the distance between the Lower Sound ports and Fidalgo Island and Bellingham Bay. The estimated cost of this improvement is $122,000.

COLUMBIA RIVER NEAR BONNEVILLE.

Of the projected improvements on Puget Sound, the most important is the construction of a ship canal to connect Lakes Union and Washington with Elliott Bay, on which the city of Seattle is located. Lake Union lies within the city limits of Seattle, and covers an area of 905 acres. Lake Washington is a fine body of water immediately east of Seattle. It is 19 miles long and maintains an average width of about two miles. Its total area is 39 square miles. In places this lake is 600 feet deep. The average depth is about 50 feet. The estimated cost of the canal is $5,000,000. The level of Lake Washington is 31 feet above extreme low tide mark of Puget Sound, and the distance between the part of Lake Washington, which the canal will reach, and Elliott Bay, where it will terminate, is six miles. The peculiar advantage of a fresh water harbor to ocean-going vessels and the ravages of the teredo worm to piling of the wharves situated in the water front of Seattle, are the principal reasons advanced in support of the project of building the canal.

Along the Washington and Oregon coast are several bays, harbors and estuaries which are of considerable importance to the shipping interests of the Pacific Northwest. Grays Harbor and Willapa Harbor (Shoalwater Bay), are the two inlets from the ocean along the coast of Washington between the Straits of Fuca and the mouth of the Columbia river. Grays Harbor was discovered by Captain Robert Gray in the ship Columbia on May 7, 1792. It is of triangular shape, covering an area of 150 square miles. Its greatest width is 15 miles, and at high tide its bar is covered with 24 feet of water. At its apex it receives the waters of the Chehalis river. The part of the Chehalis river which it is possible for boats to navigate is about 90 miles in length. Coasting vessels now run up the river to Montesano, a distance of 15 miles. The appropriations for the improvement of this stream aggregate $13,000. South of Grays Harbor, from which it is separated by a narrow strip of land, is Willapa Harbor, formerly called Shoalwater Bay. Two

PHOTO BY GYLFE.



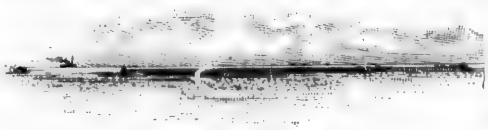
NORTHERN PACIFIC CONSTRUCTION WORK, SOUTH BEND, WASH.

channels with middle sands between afford entrance to this bay. The bay is full of shoals and flats and one-half its area is bare at low tide. The flats, however, are valuable as deposits of oysters. Fifty thousand sacks of these bivalves were shipped in 1893. Willapa Harbor, despite the numerous flats, affords ample room for the safe passage and anchorage of a large amount of shipping. The Willapa river, which flows into the bay, is at its mouth one mile wide. This stream is navigable for a distance of 17 miles inland. Rapids prevent ingress of steamers beyond that point. The appropriations for the improvement of Willapa Harbor aggregate $18,000.

ENTRANCE, YAQUINA BAY OREGON.

A few miles south of Willapa Harbor is the entrance to the Columbia river. South from the Columbia, the coast of Oregon is unbroken by indentations until Tillamook Bay is reached. This bay has an average depth of 16 feet at high tide. It is about eight miles wide and is twelve miles long. Five rivers empty into Tillamook Bay. These are the Miami, Kilches, Wilson, Trask and Tillamook. The Tillamook bar is considered one of the safest to cross on the Oregon coast. The bay at low tide consists of three channels separated from each other by sand and mud flats. The sum of $20,700 has already been expended in improving the bar and the bay of Tillamook. South of Tillamook Bay the next harbor is Yaquina Bay, into which flows the river of the same name. This harbor, like the others on the Washington and Oregon coast, was impaired by rocks, shifting sands and other obstructions to easy navigation. The improvements already made here by the government have resulted in increasing the depth of water over the bar at the entrance from a depth of 7 feet to 15 feet at low tide. Congress has appropriated $550,000 for improving this harbor.

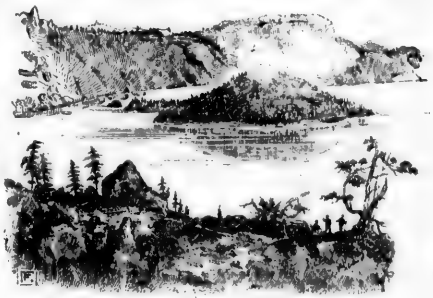
The best harbor on the Oregon coast south of the Columbia river is Coos Bay. This is a large body of water with a very irregular shore line. Extensive improvements have been made here, the appropriations already made for this work having aggregated $338,750. It is estimated by the United States engineering department that the cost of improving Coos Bay as approved by the war department will be $2,466,412. The improvement to this harbor consists principally of jetties which have the effect of keeping the channel over the bar from changing its position and to divert the great volume of water flowing out of the harbor into the ocean to narrow limits. There is now an average depth of 18 feet of water at low tide over the Coos Bay bar.



ENTRANCE TO COOS BAY, OREGON.

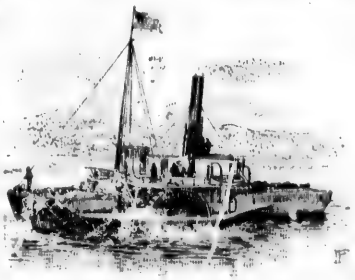
The Pacific Northwest contains many lakes, some of which are unexcelled in the beauty and grandeur of their surroundings. In this article only the large, navigable lakes of this section will be mentioned. In separate articles of "The Handbook," however, which treat of different sections of the Northwest, the lakes of these respective localities are fully described. The most beautiful of the many lakes of the Northwest is Chelan, lying just beyond the Columbia river in Okanogan county, in Eastern Washington. This lake extends for a distance of 70 miles

into the very heart of the Cascade Mountains. It is navigable for its entire length. It is fully described in a separate article of "The Handbook." Kootenay Lake, already mentioned in this article under the head of West Kootenay, is a romantic Alpine sheet of water, and along its mountainous shores are numerous mining camps. A line of boats plies between the different settlements on this lake, and up the Kootenay river to Bonner's Ferry, Idaho. Lying in the center of a beautiful and fertile valley of the same name in Montana is the Great Flathead Lake. Steamers ply on this lake between its southern and northern shores. Nestling among the mountains of Northern Idaho is Lake Cœur d'Alene. Across this lake ply steamboats which, with their rail connections, form a continuous route between Missoula, Montana, through the great Cœur d'Alene mining district to Spokane. This line is known as the Cœur d'Alene branch of the Northern Pacific railroad. The Cœur d'Alene and St. Joe rivers flow into this lake. Both of these streams are navigable. The outlet of the lake is the Spokane river, which joins the Columbia many miles to the westward.



CRATER LAKE, KLAMATH CO., OREGON.

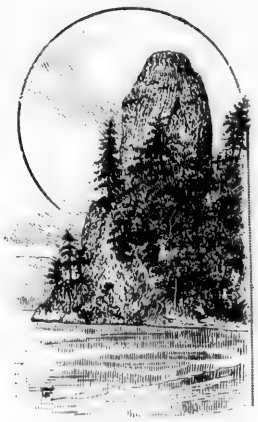
On the line of the Northern Pacific railroad, in the Bitter Root Mountains, is Lake Pend d'Oreille, sparkling in its setting of castellated hills. Lake Pend d'Oreille is one of the great lakes of Idaho, and it is one of the most attractive bodies of fresh water of the Northwest. In Southeastern Oregon are a series of lakes which have led to this region being called the lake district of the state. Upper and Lower Klamath Lakes here are jointly about 60 miles long. The Lower Klamath Lake extends across the boundary line into California. Lying partly in Lake county, Oregon, and partly in Northern California is the Great Goose Lake. It is 50 miles long and from 8 to 15 miles wide. Its depth is from 12 to 40 feet. Abert, Warner, Summer and Silver Lakes in the county are all fine bodies of water, teeming with fish, and lying in the midst of charming scenery. In Harney county, Oregon, is Malheur Lake, a large and deep body of water. In different parts of the Northwest are innumerable other lakes, all of which, as before mentioned, are fully described in subsequent articles of "The Handbook."



THE BEAVER, THE OLDEST STEAMER ON THE PACIFIC COAST.

Railroads of the Northwest.—Perhaps the greatest agent in the enlightenment and civilization of any people is the railroad. No country without the aid of the railroad is in close touch with the thought and action of the higher civilized centers. The telegraph does much as a national educator, but the railroad, affording rapid and frequent means of transportation between points widely separated from each other, offers such excellent opportunities for conveying intelligence over long distances,

information contained in both the standard publications of the country and in personal letters, that its importance to any new section of country cannot be over-estimated. Practically all the solid advancement made in the Pacific Northwest has been accomplished since the tracks of the transcontinental lines first reached tide water on the Pacific coast, and it is to the perfection of the railroad systems of the Northwest that this part of the United States has the most to look to for its future advancement.



ROOSTER ROCK—COLUMBIA RIVER.

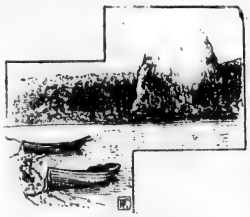
The railroad has been an essential factor in the growth of the states of Oregon and Washington. Before the iron horse reached the coast the maritime ports of these states recieved their freight from San Francisco and the East by sail and steamers. The railroad was needed to furnish more rapid and direct means of communicating with the East than had been afforded by the water transportation lines. No railroad could reach the West, however, without being brought into direct competition for its freight traffic with the numerous lines of steamers and fast sailing vessels plying between Oregon and Washington and all ports of the coast, as well as between the Northwestern States and all parts of the Orient. The water lines have given the people of the Northwest the benefit of competition, which has placed the freight charges of the transcontinental railroads on a most reasonable basis, and it has been largely due to these low freight rates that the Northwest has made such marvelous advancement during the past ten years.

The rail and water lines of transportation in the Northwest are so closely allied that it is necessary to state for the information of the reader that nearly every railroad line reaching this section has direct connections with lines of boats plying the waters of Puget Sound, the Columbia river and its tributaries and the Pacific ocean. The railroads, with their water connections, form a net work of transportation lines that cover all the best parts of the Northwest, and the railroads, through their connections here with ocean steamers for nearly all the ports of the world, afford a means of rapid communication with New York and the Orient that is of the utmost importance to the commercial interests of the United States.

ON COLUMBIA RIVER.

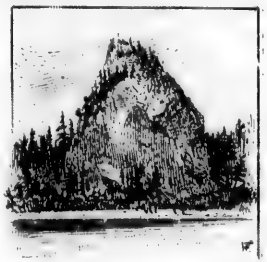
Prior to 1880 Oregon and Washington practically were without railroads. A few short lines of road had been built in the Northwest before that time, but, like the Oregon & California extending south from Portland through the Willamette valley for a distance of 200 miles, these roads were merely local in their nature and they were but uncompleted parts of what have since been developed into great railroad systems. Traffic between this coast and the East was then handled by steamer to San Francisco where connection was made with the Central and Union Pacific. The Mullan road, a famous military highway running from Walla Walla on

the west to Fort Benton at the head of navigation on the Missouri river, on the east, was the only overland route followed by traffic from the Northwest to the East. Thousands of travelers passed over this road in the 60's and 70's in canvas-covered wagons. Most of the early settlers in Oregon reached this state by way of Salt Lake City, having crossed the plains to that point, where they left the California trail, reaching Oregon by following the course of the Snake river to its junction with the Columbia near Wallulu, from whence they came by water down this noble stream and up the Willamette to Portland. From the Willamette valley, the earliest settled part of the state, settlers drifted north to the country bordering on Puget Sound. For years before the coming of the railroad, long teams of wagons drawn by oxen and laden with supplies regularly left the large distributing centers along the coast for the smaller settlements of the interior. Nearly all articles of commerce not produced in the Northwest, and consumed here, were brought by sailing vessel around Cape Horn. A dependence on this means of securing supplies from the East often caused privations among the early settlers of the country. The failure of a ship laden with provisions often sent staple articles of consumption up to fabulous prices. While the Northwest is a country of many varied resources, almost everything required for the support of man now being raised here in abundance, the early settlers of this region placed a dependence upon the arrival of a provision-laden ship that often caused them trouble. Once in the early history of Seattle the failure of a ship to reach the Sound in its accustomed time, reduced the inhabitants to sore extremities. But one barrel of pork remained in the city to feed the people. This was anchored on the beach in front of the hamlet. One morning it was missing, having evidently floated out on a very high tide. This was a public calamity at the time and the entire population gathered around the gaping hole the barrel had occupied, bewailing their loss. On the following Sunday the single preacher who looked after the spiritual welfare of the settlement, delivered an eloquent sermon on the bad influence of a high tide on salt pork and the uncertainty of placing implicit confidence in man's ability alone to care for man's everyday wants. No man who was willing to "hustle," as they say in the West, ever went hungry in either Oregon or Washington, but the dependence on sailing vessels for provisions that could be produced to better advantage here soon taught the people a lesson, and when the railroad did finally reach the states of Oregon and Washington it found a country well settled and in many places highly cultivated. It was the fuller development of the Northwest, made before the advent of the iron horse, that has resulted in the rapid advancement of this section during the past few years which has made it one of the most promising parts of the United States.



CASTLE ROCK—COLUMBIA RIVER.

The first railroad built in Oregon was, at the time of its conception, an indefinite and apparently impracticable scheme fostered by a few men of the adventurous type. These men, with Simon G. Elliot at their head, formed themselves into a combination which they named the California & Columbia River Railroad Company. They surveyed a route from Portland south through the Willamette valley to the Siskiyou Mountains. The expenses



CASTLE ROCK, COLUMBIA RIVER.
A NEAR VIEW.

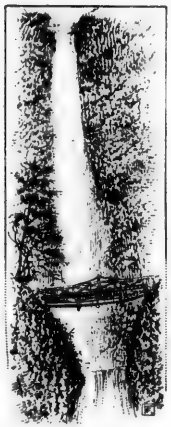
of this preliminary survey were principally borne by people along the line of the proposed road. The surveyors in charge of Colonel Charles Barry reached Portland in September, 1864. They had practically surveyed the entire route from the Sacramento river north to Portland.

Using this survey as a basis of operations, the promoters of the railroad agitated the matter of building a road over its course. The project was brought before the Oregon State Legislature and Congress was memorialized by that body to authorize the construction of the road. In 1866 a bill passed Congress authorizing the formation of two companies, one in California and one in Oregon, to construct a continuous line of railroad from Portland on the north, south to Marysville, Cal. This enabling act also contained a clause granting the company building the road a subsidy of 7,000,000 acres of government land. Owing to the ambiguous provisions of the bill there was considerable misunderstanding and ill-feeling engendered among the different members of the company when the work of constructing the road had been commenced. This misunderstanding was caused by the fact that the Willamette valley is settled on both sides of the Willamette river which flows through it. Each side of the river was well settled, and when the time for building the road had arrived, the people on both sides of the river demanded that the proposed road should afford them the direct rail communication with Portland to which they felt they were entitled. This dissension finally resulted in the formation of two companies for building a road south through the valley. One of these companies was for the East Side and the other was clamoring for the rights of the West Side, and both demanded the government subsidy. The two roads were built, however, the one on the East Side finally reaching Ashland, in the Rogue River valley, and the other, after long delays, reaching Corvallis, about 100 miles south of Portland. The East Side road is now the direct all-rail route between Portland and San Francisco, while the West Side line has never been extended beyond Corvallis. The East Side company first completed its line, and having kept within the time-limit allowed by the Act of Congress, earned the valuable land grant for which both companies had been competing. Both of these lines and their numerous branches subsequently became merged into the great Southern Pacific system, under a long-time lease, and they are now all operated under the direct control of the Southern Pacific Company.

ONEONTA FALLS, COLUMBIA RIVER.

HORSETAIL FALLS, COLUMBIA RIVER.

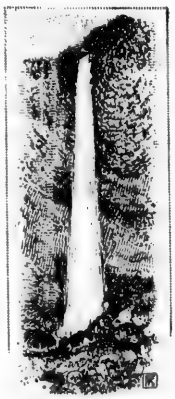
The roads controlled by the Southern Pacific in Oregon are the following: the East Side main line, extending from Portland south to Ashland, a distance of 340 miles. A few miles the other side of Ashland connection is made by this line with the California end. A branch of 13 miles in length leaves the East Side road at Albany, 80 miles south of Portland. This road runs east to Lebanon, crossing the Woodburn-Springfield branch at Lebanon Junction, nine miles east of Albany. Another branch of the East Side road is known as the Woodburn-Springfield line. This leaves the main line at Woodburn, 35 miles south of Portland, and runs south through the valley east of and parallel to the main line as far as Natron, 93 miles.



MULTNOMAH FALLS.
COLUMBIA RIVER.

The West Side division of the Southern Pacific runs from Portland to Corvallis, a distance of 97 miles. The Portland and Yamhill and Oregonian division of the West Side road is 80 miles long by its through line. This road runs south through the west part of the Willamette valley from Portland, paralleling and crossing the main West Side road, to Airlie. A branch leaves this road at Sheridan Junction for Sheridan. This branch is about seven miles long. The Portland and Yamhill and Oregonian division was formerly a narrow-gauge. It has since been made a standard-gauge from Portland to Dundee, a distance of 29 miles. From Dundee south the road is still operated as a narrow-gauge. The old rail has been left on the road from Dundee to Portland, and this part of the road can be operated either as a narrow or standard-gauge.

The first through train to San Francisco from Portland was run over the East Side division December 16, 1887. All the lines of the Southern Pacific in Oregon pass through the Willamette valley, famous for the fertility of its soil, the diversity of its resources and for its charming river and mountain scenery. The through line to San Francisco crosses the Siskiyou Mountains, and in its course south winds along the foothills of Mt. Shasta, one of the loftiest peaks of the West. It is along this part of the line that some of the grandest views of the coast can be seen. The construction of this line through the Siskiyou Mountains was considered one of the most remarkable railroad engineering achievements in the history of the United States. The road for the entire distance between Portland and San Francisco is well and substantially built, and this forms one of the most important railroad systems of the west.

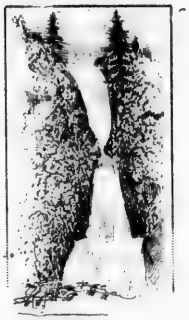


LATOURELLE FALLS.
COLUMBIA RIVER.

In 1892 the local shipments of wheat over the Southern Pacific lines in Oregon aggregated 62,613 tons. During the same year these lines hauled 16,523 tons of other grains. The flour shipments over the lines in 1892 amounted to 30,442, tons and they hauled during the same time 8,500 tons of feed and millstuffs. During the same year the roads carried 44,000 tons of lumber, 2,800 tons of green fruit, 4,500 tons of vegetables and 10,600 tons of livestock.

The Union Pacific system in Oregon and Washington is an amalgamation of the Oregon Short Line and the lines of the Oregon Railway and Navigation Company. The Union Pacific system which reaches Oregon extends from Granger in Wyoming, to Portland, a distance of 945 miles. The part of this road from Granger to Huntington, a distance of 541 miles, is known as the Oregon Short Line. From Huntington to Portland the Union Pacific runs over the old track of the Oregon Railway and Navigation company. The distance from Huntington to Portland is 404 miles. The Union Pacific system in Oregon now comprises what is known as the Pacific division of this road. It has a total trackage of 523 miles. In connection with the Pacific system the company operates a fleet of fine ocean steamers between Portland and San Francisco and also a perfectly equipped line of river steamers on the Columbia and Willamette rivers, with headquarters at Portland. For 187 miles of the distance

between Portland and Huntington the line of the Union Pacific follows along the course of the Columbia with the exception of 20 miles at the Portland end of the road. Between The Dalles and Portland, a distance of 88 miles, this route affords some of the grandest and most picturesque bits of scenery on the continent. Twenty miles below The Dalles the Columbia river enters the great gorge of the Cascade Mountains. It is here that the works of nature have taken many fantastic forms. From this point to Portland there is spread before the traveler a panorama of indescribable grandeur. The Columbia river is noted for its scenic effects, and the line of the Union Pacific follows the river for its entire course through the great chain of the Cascade Mountains.

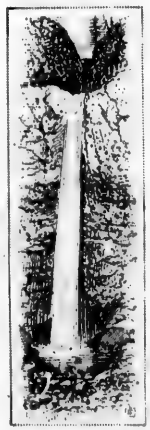


BRIDAL VEIL FALLS. COLUMBIA RIVER.

Branches of the Union Pacific in Oregon leave the main line at Arlington 142 miles east of Portland and run to Heppner, a distance of 45 miles, and another branch leaves the main line at La Grande, 305 miles east of Portland, and runs to Elgin, 20 miles distant. Still another branch runs from Umatilla, 187 miles east of Portland, to Walla Walla, in Washington, a distance of 58 miles. Under the head of railroads in Washington will be found a complete list of the mileage of the Union Pacific in that state.

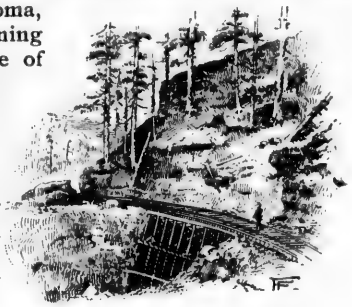
The Union Pacific taps the most fertile and productive part of Eastern Washington. It annually carries to Portland millions of bushels of wheat for foreign shipment. The average grain receipts of this road during the harvest season run from 125 to 200 cars a day. It is estimated that the Union Pacific carried 8,000,000 bushels of wheat from the interior to tide water at Portland in 1892. The lumber shipments from Oregon over this line during times when business is in its normal condition average about 25 cars a day. The company's extensive shops, located in the suburban part of Portland known as Albina, have a payroll of $40,000 a month. The company also maintains large shops at La Grande in which 60 men are employed, and shops at all the terminal divisions of the road in Oregon.

The Northern Pacific was the first transcontinental road to run its cars into Portland. Through the instrumentality of Henry Villard, the Oregon Railway & Navigation Company was formed for the purpose of building a line of railroad along the Columbia river to connect with the main line of the Northern Pacific at Wallula Junction, 216 miles east of Portland. In 1883 connection was made between these two roads. At that time Henry Villard was at the head of the Northern Pacific, Oregon Railway & Navigation Company and the Oregon & California lines, extending south through the Willamette valley from Portland, and close connection was made between all of these lines. Mr. Villard was unable to carry his great scheme of uniting all the great railroads of the Northwest to a successful termination, and shortly after the completion of the Northern Pacific, and after the expenditure of vast sums of money to perfect the great system, Henry Villard experienced his first great downfall. This crash was precipitated by a period of general depression in business. This



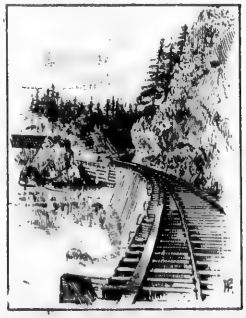
PACE CREEK FALLS. COLUMBIA RIVER.

resulted in the disintegration of all the lines of road which Henry Villard had labored so hard to hold together. The Northern Pacific, through a traffic arrangement with the Union Pacific, continued to run its through trains into Portland by the Columbia river route until 1888, when it completed the construction of its direct line to Puget Sound over the Cascade Mountains. The Northern now runs its trains between St. Paul and Portland by way of Tacoma, the through passenger trains over this line running direct between these two points with a change of engines only at the different terminal divisions along the road. The road enters Oregon at Goble, a point on the south bank of the Columbia river opposite Kalama. Connection between Goble and Kalama is made by means of an immense iron ferry, which carries the fully loaded trains over the river here. The distance between Portland and Goble is 39 miles. Reference to the Washington part of the present article should be had for complete data of the mileage of the Northern Pacific in that state.



SCENE, OREGON PACIFIC RAILROAD, OREGON.

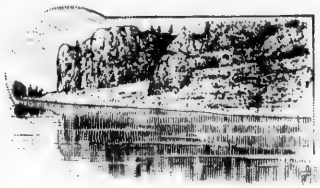
The Oregon Pacific railroad extends from Yaquina Bay, an indentation of the coast, about 100 miles south of the entrance to the Columbia river, through Corvallis and Albany into the heart of the Cascade Mountains. It runs across the entire length of the rich Willamette valley from west to east. The end of the track in the Cascade Mountains is 3,500 feet above sea level. All along this line are charming bits of scenery, and it traverses the best portion of the state. The total length of the completed road is 142 miles. At Corvallis, 72 miles east of the ocean terminus at Yaquina, the road connects with the West Side division of the Southern Pacific. At Albany, 11 miles east of Corvallis, the road crosses the tracks of the main line of the Southern Pacific. Connecting with the Oregon Pacific at Yaquina Bay is a line of fast steamers which carry passengers and freight from this road to San Francisco. The completion of the Oregon Pacific between Yaquina Bay and the Willamette Valley has been of great benefit to the residents of the latter section in the low rates it has afforded on freight from San Francisco for the valley points reached by this line, and also on the wheat shipments from these valley points to San Francisco. The road has been badly managed, however, and it has been in financial difficulties for years, and what its ultimate outcome will be has puzzled many of the men who were supposed to know the most about its affairs. The residents along its course have hopes that it will some day be extended across the Cascade Mountains to an Eastern connection, but at the present writing these hopes give no promise of an early fulfillment.



SCENE ALONG OREGON PACIFIC RAILROAD.

The Coos Bay, Roseburg & Eastern railroad, now under construction between Marshfield and Roseburg, follows closely along the line of the present stage road through the pass of the Coast range of mountains. The part of this road between Marshfield and Coquille City, a distance of 25 miles, is now completed, and trains are

running over the road. The road-bed is graded between Coquille City and Myrtle Point. It was the financial panic of 1893, alone, that prevented the completion of this road through to Roseburg during the past year.

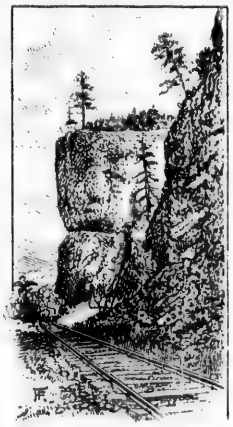


BRIDAL VEIL BLUFFS COLUMBIA RIVER.

A short line of railroad, six miles in length, runs from Jacksonville, in Southern Oregon, to Medford, a station on the main line of the Southern Pacific. This line is owned by Portland capital principally. It is operated under the name of the Rogue River Valley Railway Company.

A short line of railroad runs from Astoria south, along the coast, to Clatsop Beach points. This road is fully described in connection with the Astoria article.

Over 40 years ago, in the Senate of the United States, Thomas H. Benton, of Missouri, pointed his prophetic finger to the west and said, "There is the east; there is India. The road I propose is necessary to us, and now. The title to Oregon (then including what is now Washington) is settled, and a government established. California is acquired, people are there and a government must follow. We own the country from sea to sea, from the Atlantic to the Pacific, upon a breadth equal to the length of the Mississippi, and embracing the whole temperate zone. We can run a road through and through the whole distance, under our flag and under our laws. An American road to India through the heart of our country will revive, upon its line, all the wonders of which we have read, and eclipse them. The western wilderness, from the Pacific to the Mississippi, will start into new life at its touch. Let us act up to the greatness of the occasion, and show ourselves worthy the extraordinary circumstances in which we are placed by securing, while we can, an American road to India, central and national, for ourselves and our posterity, now and hereafter, for thousands of years to come."



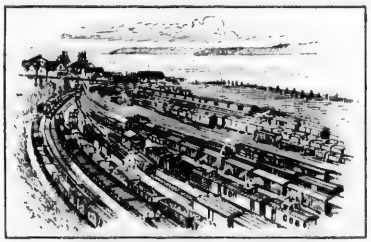
ONEONTA BLUFFS-COLUMBIA RIVER.

The road glowingly portrayed by Benton, nearly half a century ago, has been built. It is the Northern Pacific, and it ran its first through passenger train across the present great and prosperous state of Washington in 1883. Henry Villard, then the ruling genius in the management of the road, elaborated and consummated a scheme which involved the construction of the Northern Pacific, the lines of the Oregon Railway & Navigation Company, and the extension of the lines of road in the Willamette valley. The downfall of Villard and the collapse of his great undertaking has been previously mentioned in this article. In 1888, the Northern completed its main line to Puget Sound at Tacoma. In the history of railroad building and in the growth of permanent settlements, never before was there witnessed the activity that followed the completion of the Cascade division in the country it crossed. Villages sprang up on Puget Sound and in Eastern Washington in a week; they rapidly grew into towns and, within two years, developed into large and prosperous centers of population. In the short period of two years, Spokane, Seattle and Tacoma grew from struggling and unstable settlements to cities of over 25,000 inhabitants each.

The same remarkable development took place in the farming districts of the state. The great Inland Empire, as Eastern Oregon and Eastern Washington are called, was metamorphosed from an uninhabited district into a section of waving fields of grain, by the advent of the iron horse. As in every other line of industry, the state of Washington has made remarkable progress in railroad building during the past few years. In 1892, Washington led all other states of the Union in miles of railroad constructed. In that year 421 miles of road were laid in the state. Pennsylvania, in 1892, was the second state in the Union in mileage of new railroads constructed, her record for that year having been 256. On the first day of January, 1893, Washington had 2,614 miles of railroad lines, and the assessed value of railroad property in the state at that time was $12,204,725. Four great transcontinental roads now own trackage in Washington. These are the Northern Pacific, Union Pacific, Great Northern and Canadian Pacific. The last named road runs trains from its main line, in British Columbia, over the Bellingham Bay & British Columbia railway to Fairhaven and New Whatcom, on Bellingham Bay, where connection is made with the Great Northern. It also has connection in Eastern Washington with the Spokane Falls & Northern railway, running north from Spokane. Connection between the two roads is made by boats running from Ravelstoke, a station on the main line of the Canadian Pacific, through the Arrow Lakes, down the Columbia river to the American town of Northport, the northern terminus of the Spokane Falls & Northern.

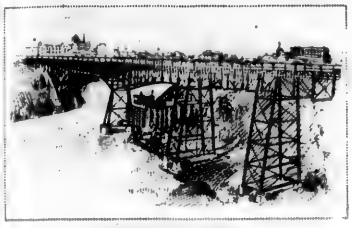
"SWITCHBACK," SUMMIT, CASCADES, N. P. R. R.

The Northern Pacific owns and controls 1,244 miles of track in Washington. The main line enters the state 30 miles east of Spokane, follows a zig-zag course to Tacoma and, from the latter point, turns and runs due south to the Oregon state line, where connection is made with the Oregon part of the road for Portland. The total length of this main line, in the state of Washington, is 541 miles. The Northern has 16 branch and auxiliary lines in the state with a total trackage of 703 miles. The names of these roads, with the mileage of each, are as follows: Spokane & Palouse, 105 miles; Farmington branch, 7 miles; Central Washington, 115 miles; N. P. Cascade railway, 7 miles; Burnett branch, 4 miles; Crocker branch, 5 miles; Tacoma, Orting & Southeastern, 8 miles; N. P. & Puget Sound Shore, 31 miles; Roslyn branch, 5 miles; Green River & Northern, 4 miles; Tacoma, Olympia & Grays Harbor, Centralia to Ocosta, 66 miles; Lakeview branch, via Olympia, to Ocosta, 43 miles; Seattle, Lake Shore & Eastern, Spokane branch, 50 miles; Seattle, Lake Shore & Eastern, Western branch, 164 miles; Yakima & Pacific Coast, 94 miles.



N. P. R. R. CO.'S YARDS, TACOMA.

The more important branches of the Northern Pacific in Washington cover all the best parts of the state. The rich Palouse wheat growing section of Eastern Washington is thoroughly covered by the Palouse branch and its connections. This branch leaves the main line at Marshall Junction, 10 miles west of Spokane, and runs to Juliaetta, in Idaho, a distance of 115



SPOKANE RIVER, SPOKANE.

miles. Branches of the Spokane & Palouse leave the main line at Belmont and run to Farmington, a distance of seven miles, and also at Pullman Junction and run to Genesee, a distance of 27 miles. Part of the Spokane & Palouse system is in Idaho, and the mileage of the road not mentioned in the Washington article will be found under the head of Idaho.

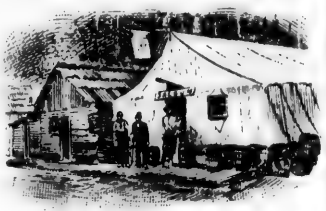
The Central Washington extends from Cheney, 17 miles west of Spokane, to Coulee City, in the heart of the Big Bend country, a distance of 108 miles. This road covers the best part of the famous Big Bend wheat belt, comprising thousands of acres of the finest land on the coast. The Seattle, Lake Shore & Eastern runs from Spokane to Davenport, the principal town of the Big Bend country, a distance of 50 miles. This road parallels the track of the Central Washington from Medical Lake to Davenport, a distance of 28 miles. The Roslyn branch and other short branches of the Northern Pacific in Western Washington reach the great coal fields lying in the foothills of the Cascade Mountains. An important branch of the Northern Pacific in Western Washington is the Seattle, Lake Shore & Eastern. This road runs from Seattle east to North Bend, a distance of 59.5 miles. This line affords an outlet for the rich coal mines at Gilman, 42 miles east of Seattle. A branch of the Seattle, Lake Shore & Eastern also runs north from Woodinville Junction, 23.7 miles east of Seattle, to Snohomish and Sedro, the latter point being 85 miles north of Seattle. At Sedro, connection is made for Anacortes. The Northern Pacific & Puget Sound line runs between Tacoma and Seattle, a distance of 49 miles, connection being made with the main line of the Northern Pacific by this road at Meeker's Junction, about 10 miles east of Tacoma. Another important branch of the Northern Pacific in Western Washington is the line run under the name of the United Railroads of Washington. This line leaves the main line of the Northern Pacific at Lakeview, between Tenino and Tacoma, runs to Olympia, a distance of 24.6 miles, and extends to Gate City, a distance of 43.9 miles from Lakeview. From Gate City a branch extends to Centralia, on the main line of the Northern Pacific, 49 miles south of Tacoma. The length of this branch to Centralia is 13 miles. The road also extends from Gate City to Ocosta, on Grays Harbor. Ocosta is 56 miles from Gate City. A branch of the Northern Pacific also runs from Chehalis to South Bend, on Willapa Harbor, a distance of 58 miles.

The Great Northern railway completed its transcontinental line and commenced running through trains between St. Paul, Minnesota, and Seattle, Washington in July, 1893. This splendid railroad system is in many respects one of the best in the United States. It is a monument to the builder, James J. Hill. Early in the 70's, Mr. Hill secured control of an insolvent railroad line in Minnesota, with a total trackage of about 100 miles. Using this run-down and unprofitable line as a foundation on which to build, he has managed to construct without the aid of government support a magnificent systems of railroads, with a total mileage of 4,253. The Great Northern has opened up for settlement in Washington a vast area of

PHOTO BY MAXWELL.

PICTURESQUE ROCKS, SPOKANE RIVER.

fertile agricultural lands lying in the Big Bend country in the eastern part of the state. It also has furnished an outlet for the Okanogan, Chelan and Kootenai mining districts, rich in future promise. The Great Northern system embraces 487 miles of road in Washington. The main line in the state is 345 miles long. In addition to the main line, the Seattle & Montana branch has 119 miles of track in the state, and the Bellingham Bay & British Columbia branch is 23 miles in length.



A GREAT NORTHERN RAILWAY TOWN.

The Great Northern enters Washington from the Panhandle of Idaho and runs directly west through Spokane, Rock Island and Wenatchee and the Big Bend country to the Cascade Mountains which it crosses in Stevens Pass. From this latter point it runs south to Seattle. A branch of the Great Northern r[illegible] from Seattle through an exceptionally rich country to Bellingham Bay, from w[illegible]oint another branch extends north to the Canadian line.

The Union Pacific operates 588 miles in Eastern Washington. The system here is an amalgamation of the Oregon Railway & Navigation Company's lines and local lines. The Union Pacific covers the famous Palouse wheat district of Eastern Washington and the highly fertile valley of the Snake river. No other section of the Northwest has superior transportation facilities to those enjoyed by the part of Washington covered by the Union Pacific. The main line of the Union Pacific in Washington runs from Pendleton, Oregon, to Spokane, Washington, a distance of 251 miles. From this line a ramification of branch roads, all operated under the same system, extend through the adjacent country. One of these lines leaves the Spokane line at Tekoa Junction and extends through the rich Cœur d'Alene mining district to Mullan, a distance of 87 miles. Most of this line runs through the state of Idaho. Another branch extends from Walla Walla to Umatilla, Oregon, a distance of 58 miles. Still another branch of the Spokane division runs from Bolles Junction, 25 miles east of Walla Walla, to Dayton, a distance of 12 miles. Another branch runs from Dudley Junction, six miles east of Walla Walla, to Dixie, a distance of six miles. A branch also leaves the main line at Dudley Junction and extends to Dudley, a distance of two miles. At Starbuck, 46 miles east of Walla Walla, a branch runs to Pomeroy, a distance of 30 miles. An important branch of this road leaves the main line at La Crosse, 81 miles east of Walla Walla, and runs to Connell, 53 miles distant, where connection is made with the main line of the Northern Pacific. A branch of the Spokane division also runs from Colfax to Moscow, a distance of 28 miles. The Washington division of the Union Pacific is one of the most important railroad systems of the West. This system reaches such important Washington places as Walla Walla, Dayton, Colfax, Palouse, Farmington and Ri-

CŒUR D'ALENE RIVER, IDAHO.

paria. All of the lines of the Union Pacific in Washington connect with the main line in Oregon thus affording direct through rail connection to Washington via the Union Pacific, to Pacific Coast points and to all parts of the United States.

FALLS PEND D'OREILLE RIVER.

The Oregon Improvement Company operates four lines of road in Washington. These are the Columbia & Puget Sound, Port Townsend & Southern, the Olympia branch and the Seattle & Northern. The total trackage operated by the company in the state is 164 miles. The most important road operated by this company is the Columbia & Puget Sound, extending from Seattle to Franklin, a distance of 34 miles, with a branch from Black River Junction to Coal Creek, 11 miles in length. This road affords an outlet to the rich coal mines of Renton, Black Diamond and Franklin, and is a fine paying piece of property. The other lines operated by the Oregon Improvement Company in Washington are but disconnected pieces of what was intended should be a great trunk system, and they are practically without an identity of their own that would entitle them to much importance in railroad circles.

In Eastern Washington the Hunt lines (Washington & Columbia River Railway Co.) cover 111 miles of road.

This road has close traffic arrangements with the Northern Pacific. It runs from Hunt's Junction, near Wallula Junction, where the Northern Pacific and Union Pacific roads meet, to Dayton, Washington, a distance of 86.8 miles. Another line of this same system also runs south from Hunt's Junction to Pendleton, Oregon, a distance of 40.3 miles. A branch of this same road runs from Eureka Junction, 22 miles east of Hunt's Junction, to Pleasant View, a distance of 19.40 miles. Another branch of the Hunt system runs from Killion Junction, 19.2 miles south of Hunt's Junction, on the Pendleton end of the road, to Athena, a distance of 14.1 miles. The Hunt roads, as originally projected, would have been developed into a very important system. Portland at one time raised a subsidy of $500,000 for the extension of this line down the Columbia river to Portland, and arrangements were also completed at the same time for completing the line across the Blue Mountains from Pendleton to La Grande and Union, in Eastern Oregon. The financial depression, however, prevented the completion of this system. The Hunt lines tap a very rich section of country, the local traffic of which is heavy, and through the valuable traffic arrangements which this road has with the Northern Pacific it is regarded among practical men as a splendid piece of railroad property.

An important railroad line of Eastern Washington is the Spokane Falls & Northern. This line runs from Spokane through the Colville valley north to the international boundary line. From the boundary line the road continues to Nelson, on Kootenay Lake, under the name of Nelson & Fort Shepherd railway. The America dnivision of this road is 127 miles in length. At Northport, a station in Washington on this line, connection is made with boats running up the Columbia river to Ravelstoke, on the Canadian Pacific. Thus Eastern Washington is practically given the benefit of four transcontinental lines of railroad.

CLARK'S FORK RIVER.

There are 207 miles of railroad in Washington not included in the systems already mentioned. These lines

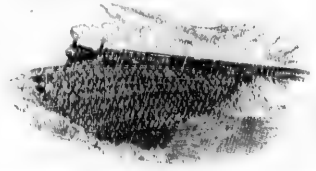
vary in length from 5 to 52 miles each. They are principally used as feeders for the larger roads. They tap principally lumbering and mining districts. The Everett & Monte Cristo railroad is one of these roads. This road is 45 miles in length. It taps the rich mining districts of Monte Cristo and Silver Creek, in Western Washington. The road starts from the town of Everett on the Snohomish river, near the salt water of Puget Sound.

MARENT TRESTLE NEAR MISSOULA

Idaho, the least developed of the four states of the Pacific Northwest, has three transcontinental railroads, and 1,025 miles of railroad track are credited to the state. The assessed valuation of railroad property in the state is $5,812,065. The peculiar shape of the state is such that its extreme northern end is only about 84 miles wide. Across this "Panhandle," as it is called, run the main lines of the Northern Pacific and the Great Northern railroads. The Union Pacific enters the state at its southeastern corner and runs across the state in a northwesterly direction, passing through the counties of Bear Lake, Bingham, Logan, Elmore, Ada and Washington, to the town of Huntington, on the border of the state of Oregon, a distance of 465 miles. From Ogden, Utah, the Utah & Northern branch of the Union Pacific enters Idaho near the town of Franklin, where it forms a junction with the Oregon line at McCammon, passes north through the town of Pocatello, and crosses the Snake river at Blackfoot, 24 miles north of Pocatello. Around Blackfoot are thousands of acres of reclaimed land now producing large crops of hay and cereals. From Blackfoot the road continues north to Beaver Canyon, at the foot of the Main Divide of the Rocky Mountains. At this station connection is made by stage for the Yellowstone Park. Leaving Beaver Canyon the road passes over the Main Divide into Montana, passing through the town of Dillon, in Beaverton valley. From Silver Bow Junction the Montana Union railroad, an auxiliary line, branches off, one spur running to Butte City, while the other runs through Stuart to Garrison, where connection is made with the Northern Pacific for Helena.

The Wood River branch of the Union Pacific leaves the main line at Shoshone, 623 miles east of Portland, and runs through the towns of Bellevue and Hailey, in the Wood River mining district, to Ketchum, 70 miles north. Twenty-five miles from the town of Shoshone by stage are the great Shoshone Falls of Snake river. The river at this point dashes down between rocks nearly 1,000 feet high, and the surroundings of these falls are awe-inspiring and wierd. Seven distinct channels in this river here form as many different falls before their final plunge into the great depths of the lower river. Of the numerous great falls of the West no one possesses the grandeur of Shoshone. At Nampa, a station on the main line of the Union Pacific, 137 miles west of Shoshone, a branch 19 miles in length runs to Boise City, the capital and commercial metropolis of Idaho.

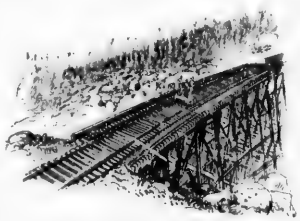
PHOTO BY HALL, MARYSVILLE.



TRESTLE, ROCKY MOUNTAINS, NEAR HELENA, LINE N.P.R.R.

In Northern Idaho the Union Pacific has some valuable connections. A branch leaves this road at Tekoa, near the Idaho line, and runs east through the famous Cœur d'Alene mining district in Idaho. This road passes through all the rich silver camps of this district, including Wardner, Osborn, Wallace, Burke, and terminates at Mullan, a distance of 87 miles from Tekoa. Burke on this line is reached by a short

branch seven miles in length running out from Wallace. Paralleling the line of the Union Pacific through the heart of the Cœur d'Alene's, is the Cœur d'Alene branch of the Northern Pacific. This branch leaves the main line at Missoula, 125 miles west of Helena, and runs through the heart of the Cœur d'Alenes to Mission Landing on Cœur d'Alene river, where connection is made by boat down the river and across Lake Cœur d'Alene for Spokane. The distance between Missoula and Mission Landing is 150 miles. The Northern Pacific, like the Union Pacific, also operates a branch from Wallace to Burke. The river part of this route from Mission Landing to the town of Cœur d'Alene is 50 miles. At the latter point the boat makes connection with the Cœur d'Alene branch of the Northern Pacific for Spokane. This road connects with the main line of the Northern Pacific at Hauser Junction, 16 miles west of Cœur d'Alene and 21 miles from Spokane.



DOWN CŒUR D'ALENE MOUNTAINS, N. P. R. R.

Part of the Spokane & Palouse system of the Northern Pacific also penetrates from Washington into Idaho. The Idaho branch of this road reaches the towns of Moscow, Kendrick, Juliaetta and Genesee. All of these towns are on the main line of the Spokane & Palouse except Genesee, which is reached from Pullman Junction, on the main line 27 miles distant.

For some years after the working out of the bonanza placer mines discovered in the early 60's, Montana was at a standstill, owing to lack of facilities for transporting the product of its mines to smelting and reduction centers where this product could be handled with a profit to the mine owners, and which prevented the heavy machinery for establishing large smelting and reduction plants in Montana from being established here. Two or three times a year boats ascended the Missouri river as far as Fort Benton, from which point ox teams distributed their cargoes of freight to different parts of the territory. A line of freighting teams was also engaged in hauling supplies from Utah to Montana, and supplies and outfits were also hauled into Montana over the military highway, known as the Mullan road, from Walla Walla, Washington. Montana is today well supplied with railroads. There are now 29 different railroads in the state, with an aggregate mileage of 2,662 miles. The total assessed valuation of railroad property in the state as fixed by the state board of equalization in 1892 was $9,287,532. The first road built into Montana was the Utah Northern, which reached Butte in 1881. This road extended north from Ogden, Utah, to Butte, a distance of 403 miles. It was originally a narrow-gauge, but has since been made a standard-gauge and is now operated in connection with the Union Pacific System. Two years later the Northern Pacific ran its trains into Helena. In 1888 the Great Northern and its allied line, the Montana Central, built its road into both Helena and Butte. Another line, the Montana Union, was built from Butte to Garrison. Subsequently the Northern Pacific constructed a cut-off from its line at Logan through the Gallatin valley to Butte. From Butte the cars of the Northern Pacific run over

TUNNEL, N. P. R. R., SUMMIT, CŒUR D'ALENES.

the tracks of the Montana Union to Garrison, a distance of 51 miles, where connection is again made with the main line.

Following the completion of its main line the Northern Pacific built and acquired control of 14 branch lines in Montana. The company now operates 1,274 miles of railroad in the state, of which 782 miles are covered by the main line and 492 miles by the branches. The combined assessed valuation of all these lines is $4,187,331. The more important of these branch lines are as follows: the Northern Pacific & Montana branch runs from the town of Logan, 24 miles west of Bozeman, to Butte, 71 miles from Logan. This road connects at Butte for Anaconda, the great mining center, 26 miles distant, and also by the Montana Union for Garrison on the main line of the Northern Pacific. A branch also leaves the Northern Pacific & Montana at Sappington, 19 miles from Logan, and runs to Harrison, 10 miles, where connection is made by two sub-branch roads to Norris, 11 miles distant, and to Pony, seven miles from Harrison. The Helena & Jefferson County and Helena, Boulder Valley & Butte branch runs from Helena to the towns of Wickes, Jefferson, Boulder, and other points. This branch follows the main line of the Northern Pacific east to Prickly Pear Junction, 4.9 miles distant from Helena, from which point the road runs south to Jefferson, 20.4 miles from Helena, where a short spur branches off for Corbin and Wickes, great smelting centers, and respectively 22.2 and 24.9 miles from Helena. The main line of the road continues south to the town of Boulder, 37.4 miles from Helena. Boulder is in the center of a rich mining and agricultural section of country, and is one of the important interior points of Montana. From Boulder a road branches off to the rich Elk Horn mining district. Elk Horn is 58 miles from Helena. The main line of this road continues beyond Boulder to the town of Calvin.

SCENERY, ROCKY MOUNTAINS, BUTTE SHORT LINE R. R.

The Helena & Red Mountain branch of the Northern Pacific runs from Helena to Rimini, a distance of 16.9 miles. Rimini is south of Helena and is a rich mining center. The Helena & Northern branch runs north from Helena to the great mining center of Marysville, a distance of 21.5 miles. At Marysville is located the great Drum Lummon mine and plant. This is one of the great mining properties of the state. Near Marysville are several rich mining districts, of which the town is the supply center. In the vicinity of the town are worked-out placer deposits of some of the richest gold-bearing gulches of the state, and all along the line of the railroad, between Helena and Marysville, can be seen the piles of gravel handled in years past by the placer miners in their search for the yellow metal here.

A branch of the Northern Pacific leaves the main line at Drummond, 53 miles east of Missoula, and runs south to the rich mining camps of Phillipsburg, a distance of 25.4 miles. This branch extends beyond Phillipsburg to Rumsey, which is 31.4 miles from Drummond. The last and most important branch of the Northern Pacific

in Montana is the De Smet & Cœur d'Alene. This road leaves the main line at Missoula, 125 miles west of Helena, and runs through a rich agricultural and mining section into the Cœur d'Alene mining district, terminating at Mission Landing, in Idaho. By extending this road from Mission Landing through Fourth of July canyon to Cœur d'Alene City, a distance of about 30 miles, the Northern Pacific could run its through trains directly through the heart of the Cœur d'Alenes, thus effecting a great saving in distance over the long detour around Lake Pend d'Oreille, which the main line now makes. A short part of the Northern Pacific road through the Cœur d'Alenes on the western end, is still a narrow-gauge track, but this could be changed to standard-gauge at a small expense, and this line be made the through route to the coast for this great transcontinental system.

The line of the Great Northern extends across the northern part of Montana, running through the states of Idaho and Washington to Puget Sound. The Montana Central, really a branch of the Great Northern, extends from Pacific Junction south through the towns of Fort Benton and Great Falls to Helena and Butte. This road is 267 miles in length, and affords the Great Northern direct entry into the great centers of Helena and Butte. The Great Northern has one or two small branch roads in Montana of no great importance.

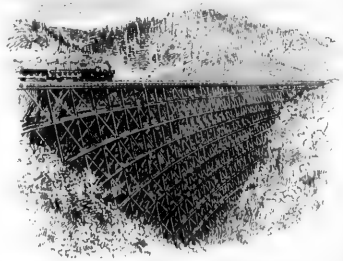
The Belt Mountain and Sand Coulee lines of the Great Northern system extend from Great Falls to Neihart, a mining camp in the Little Belt Mountains. The line to Neihart is 67 miles long. A sub-branch extends from Monarch to Barker, a distance of 11 miles. From Allen, 10 miles west from Great Falls, another spur track runs to Sand Coulee, distant five miles. At Sand Coulee are located extensive mines which produce 2,000 tons of coal a day.

The Great Falls & Canadian railway extends from Great Falls to Lethbridge, British Columbia, and at Shelby Junction this line crosses the main line of the Great Northern. At Lethbridge, as before stated, connection is made with the line of the Canadian Pacific. Aside from the Canadian Pacific, the roads in British Columbia are short lines.

BITTER ROOT VALLEY AND RIVER, LINE, N. P. R. R., MONTANA.

A branch track, eight miles long, extends from the main line of the Canadian Pacific at Westminster Junction, south to New Westminster, one of the oldest and most important centers of population in British Columbia. At Mission, on the main line of the same road, a line branches off to the south, crossing the Fraser river at this point and connecting at Huntingdon, at the international boundary line, with the Great Northern and Northern Pacific systems, over which tracks the Cana-

dian gains an entrance to Fairhaven, New Whatcom, Seattle and the other Sound points. The distance between Mission and Huntingdon is 11 miles. From Sicamous Junction, on the Canadian Pacific, a branch extends south to Okanogan Lake, a distance of 51 miles. From Okanogan Landing on this lake, steamers run down this mountain-hemmed inland body of water for a distance of 35 miles to Penticton. Stages leave this latter point for Oro, Golden and Loomiston, Washington, centers of the Okanogan country, on the American side of the international boundary line.



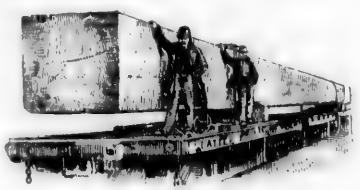
SCENE ALONG THE ESQUIMALT & NANAIMO RAILWAY, B. C.

At Ravelstoke, 379 miles east of Vancouver, the western terminus of the Canadian Pacific, connection is made with boats running down the Columbia river to Robson. From the latter point a line of railroad, 22 miles in length, extends to Nelson, on Kootenay Lake, from whence boats run to Kaslo and also to Bonner's Ferry, Idaho, where connection is made with the main line of the Great Northern. From Robson the boats continue down the Columbia river to Northport, Washington, where connection is made with the Spokane Falls & Northern Railway. At a point 822 miles east of Vancouver is the town of Dunsmore. The Alberta Coal & Railway Company runs a line south from this point to Lethbridge, a distance of 109 miles. At Lethbridge connection is made with the Great Falls & Canadian Railway running to Great Falls, Montana.

On Vancouver Island the Esquimalt & Nanaimo railway runs north from Victoria to the great coal mining centers of Nanaimo and Wellington. Wellington, the northern terminus of the road, is 78 miles from Victoria. This line passes through a good section of country, and the local traffic, together with the great coal trade of the mines, makes this a fine paying piece of property.

Timber Resources of the Pacific Northwest.—The forests of the Pacific Northwest contain about 1,890,425,000,000 feet of timber. This is five times the total amount of timber contained in all that part of the United States lying east of the Rocky Mountains. It is a difficult matter for the average mind to grasp the full significance of this vast array of figures. It is harder still to appreciate the value of this enormous quantity of timber to the future prosperity of the Northwest. Nowhere else in the world are forests which compare, in extent and in the quantity of valuable timber contained, with the vast timber reserves of the Pacific Northwest.

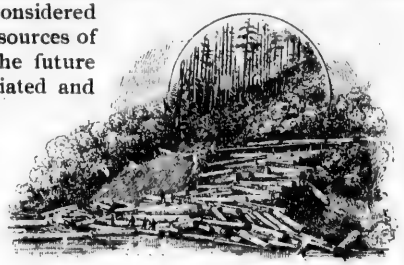
PHOTO BY LA ROCHE, SEATTLE.



FIR LOG SENT TO WORLD'S FAIR FROM STATE OF WASHINGTON. 112 FEET LONG; 51 INCHES IN DIAMETER; WEIGHT 97,000 LBS.

In the territory covered by "The Handbook" is the vast sum of $700,000,000 in natural wealth represented in its thousands of square miles of forests. Many generations will yet come and pass away before the mighty forests here are felled to the ground. It is not unreasonable to hope that the forests of the Pacific Northwest will in the near future be the chief source of supply of the world for lumber. These forests, now

dense and impenetrable, stretch from the Arctic ocean south to the boundary line between Oregon and California. This great available supply of timber is fully described in the subsequent articles on the timber wealth in the different states covered by "The Handbook." When it is considered that the timber is but one of the many resources of the vast territory now under discussion, the future promise of this region can be fully appreciated and the claims of "The Handbook" that this section will in time become one of the most prosperous parts of the continent will pass unchallenged.



A Log Rollway Near Cathlamet, Wash.

Timber Resources of Oregon.—With the exception of Washington, Oregon contains more timber than any other state in the Union. Twenty-five thousand square miles of its territory is covered with great forests, the monarchs of which tapering upwards from a circumference of 30 feet at their base finally lift their evergreen tops at a height of 375 feet above the ground.

Oregon's timber exhibit at the world's fair at Chicago was entered as a whole in competition for the first medal as an instructive, comprehensive, collective and commercial exhibit of native woods in their natural and manufactured state. This exhibit secured the first medal, which was the most coveted award in the forestry department of the fair. The only other award made on the Oregon exhibit, and it was the only other asked for, was for manufacturing paper from spruce pulp.

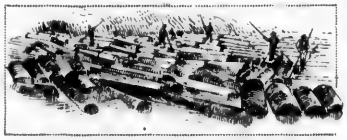
The forests of Oregon, it is estimated, contain 266,893,255,000 feet of timber. Ten per cent of this enormous forest growth is hardwood. The remainder constitutes a body of woods unsurpassed for general building purposes and for manufacturing use. The stumpage value of Oregon's timber is over $117,000,000, about 44 cents per 1,000 feet. Stumpage values are relatively higher than this in every state in the Union. In Wisconsin, where the timber is much inferior to that of Oregon, pine sells for $3.69 per 1,000 feet before it is cut to the ground. It is but a matter of a few years, however, when stumpage values in Oregon will have increased fully 500 per cent. To the Pacific coast, not only the greater portion of the United States, but most of Europe as well must, at sometime, look for its supply of lumber. Today, if the Nicaragua canal were built, Oregon lumber could be sold at a profit at the ports on either side of the Atlantic.

PHOTO BY HEINS.

Lumber Camp Near Tillamook Bay, Or.

In Oregon, as in Washington, the Cascade range of mountains is the dividing line between the heavy and light growth of timber in the state. Alongside of the timber, however, called light in Oregon, the trees of the Eastern and Southern states would appear as pigmies in size. The light growth of timber is scattered over Eastern Oregon, where it covers 11,117,350 acres of land. This part of Oregon contains 84,209,915,000 feet of timber. The average stumpage value of this timber is 62 cents per 1,000 feet, and its aggregate value is $52,210,147. In Western Oregon the forest growth is much

heavier, the average quantity of timber to the acre in this part of the state being 18,894 feet. In this division of the state there is timber to the extent of 152,683,340,000 feet, covering an area of 3,081,000 acres. This great body of timber has a present value of over $50,000,000, or an average of 33 cents per 1,000 feet. Curry county, bordering on the ocean, in the extreme southwestern corner of Oregon, has the heaviest growth of timber in the state. The timber in this county scales 21,429 feet to the acre. The largest and most extensive forest growth is found in Tillamook county, this county containing 22,092,000,000 feet of timber. Lane, Crook, Benton and Curry counties rank next in the extent of their forest wealth in the order named. Each of these counties contains over 15,000,000,000 feet of timber.



LOG DRIVING IN OREGON.

The kinds of timber found in Oregon are red fir, yellow fir, white fir, sugar pine, yellow pine, white pine, bull pine, black pine, pitch pine, Alaska pine, spruce, cedar, larch, tamarack, juniper, birch, oak, yew, cottonwood, ash, maple, alder, willow, elm, mountain mahogany, myrtle, dogwood, white cedar, chincapin, balm and cherry. On the eastern side of the Cascade Mountains pine predominates, while on the western side fir is the leading wood.

The forests of Minnesota and Wisconsin, which now furnish two-thirds of the lumber consumed in the East, are rapidly being depleted, and it is a question of but a few years in the future, at most, when the United States must depend for the greater part of its lumber supply from the virgin forests of the Pacific Northwest. When Oregon and Washington lumber becomes a staple article of commerce in the Eastern market, as it must become in time, the lumber interests of this part of the West will become one of the greatest in magnitude of any on the coast.

In the forests of Oregon are found gigantic fir and cedar trees from 6 to 19 feet in diameter. In comparison to these giants of the forest the largest trees of the East are but pigmies. In this connection, it will be interesting to compare the size of Eastern timber with that found in the far West. In Wisconsin, for instance, the average log scales about 127 feet, while in Oregon the average scale per log is 1,360 feet. In the latter state, however, many long logs have been cut which scaled from 8,000 to 11,000 feet. There is a great difference too in the diameter of the Eastern and Western timber. Logs, five and seven feet in diameter, are found in every mill pond of Oregon and Washington. Many of these logs are so large, even, that before they can be sawed it becomes necessary to split them with dynamite, and this, too, when the saws in the Western mills are the largest made in the world.

LOGGING TEAM, COOS RIVER, OREGON.

The most abundant and valuable timber found in this great forest is the family of fir, or Douglas pine. The fir tree grows to immense proportions. Trees of 250 to

300 feet in height are not at all uncommon. This permits the cutting of long-length timber for bridge and other use, which cannot be obtained from the forests of any other part of the world. The timber of the Douglas fir is heavy, strong and firm. It is unsurpassed for the framework of ships, bridges or cars. For general building purposes it is conceded to be the best timber in the world. Fir lumber is now extensively used in place of oak, it being stronger, easier to handle, taking nails easily and holding them firmly, and it is only a little over one-half as heavy as oak. A recent test of the breaking pressure of fir, Eastern oak and Eastern pine, the pieces of wood used having been four feet long and 2 x 4 inches in dimensions, made the following showing: to break the fir required a test of 4,320 pounds; Eastern oak, 2,428 pounds, and Eastern pine, 1,610 pounds. The value of the fir for car construction is now recognized throughout the country, and during the past two years the mills of the Northwest have shipped large quantities of this timber to the Eastern manufacturing centers.

TIMBER FELLING, OREGON

The merchantable fir of Oregon and Washington is of three varieties, the red, yellow and white fir. The red fir is found growing in the greatest abundance in altitudes of not over 600 feet. It is a very thrifty and rapid grower. The fiber is very hard with an equal growth all around the tree. It is a much more uniform wood to stand heavy strains than is the timber which shows a tendency to develop an undue growth to one side of the tree, as is the case of much of the Eastern timber. The lasting qualities of red fir are fully 50 per cent. more than those of white or yellow pine, while from actual tests, it has been found that a fir joist 2 x 14 inches will withstand a greater pressure than one 2½ x 16 of white or yellow pine. These and other tests have demonstrated that red fir is vastly superior to all other timber for bridge building purposes.

BIG TIMBER, OREGON.

The yellow fir grows in higher altitudes than does the red fir. It attains its greatest perfection in growth along the base of the foothills of the Cascade range of mountains. The yellow fir is a much softer wood than the red fir, and while it will not stand quite the strain that red fir will submit to, its lasting qualities when exposed to the weather are much better. It is also far superior to the red fir for flooring and finishing lumber, and it is much softer to work than the Southern pine. It is admirably adapted to building purposes and interior finishing work, and is received with much favor wherever it has been introduced.

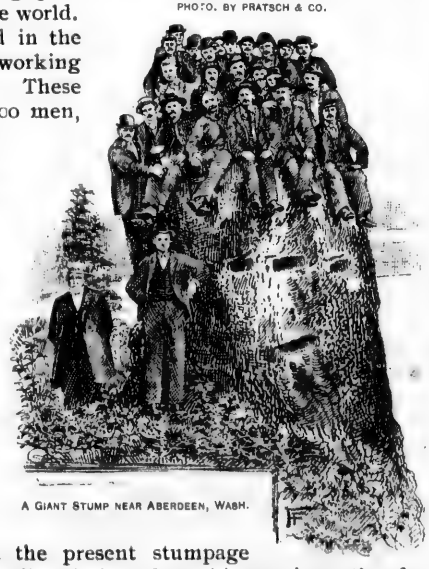
The white fir is less valuable than is either the red or the yellow variety. It is not found in large quantities in the state. It attains a great height, is perfectly

straight, and has been used principally for piling, for which it is excellently adapted. The manufacture of this magnificent body of timber into lumber and furniture is now one of Oregon's most important industries. Since January, 1844, when Hiler H. Hunt built his rickety and primitive sawmill on the banks of the little stream opposite the present town of Cathlamet on the Columbia river, Oregon has steadily been a large exporter of lumber. The bark Toulon and the brig Chenamus sailed up the Columbia river in the early 40's and carried away from this pioneer mill the first cargoes of lumber ever shipped out of Oregon. Afterwards other ships visited Oregon. Some of these vessels replaced their weak masts with new ones made of Oregon fir. The beauty and strength of these tapering spars were greatly admired in foreign waters to which these vessels sailed. It soon became known abroad that masts made of Pacific coast fir excelled masts made of any other wood. Today the dock yards at Toulon, France, and the great ship yards of England and Scotland, use Oregon fir for masts in preference to all other woods. The yacht Vigilant, winner of the international race in 1893, has a mast made of this same fir. The fame of this wood as a ship timber is world wide. The value of Oregon's timber, however, is not confined to its special adaptability for ship masts, but more especially to its superiority for lumber. It has the strength of oak, with almost the lightness of cedar, it outwears most other woods, and for general building purposes it is accepted as the best wood in the world.

LOGGING SCENE, OREGON.

It is estimated that there is invested in the 269 sawmills, 40 shingle mills and 52 woodworking establishments of Oregon about $15,000,000. These industries furnish employment to over 7,000 men, and their annual wage roll is about $3,675,000. The total output of these plants in 1892 was estimated to have been worth $10,049,217. The manufactured product consisted of 608,600,200 feet of lumber, 210,000,000 laths and 162,340,000 shingles. The output of the wood-working establishments consisted principally of sash and doors and was valued at $2,700,000.

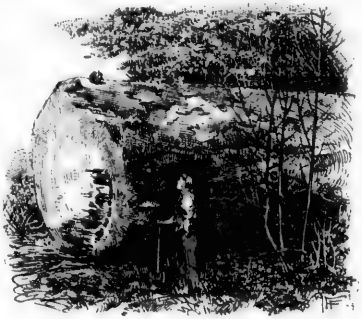
PHOTO. BY PRATSCH & CO.



A GIANT STUMP NEAR ABERDEEN, WASH.

TIMBER RESOURCES OF WASHINGTON.—The forests of the state of Washington, according to estimates computed from the latest and most reliable sources of information, cover 23,588,512 acres. In this timber belt there is now standing at least 410,333,335,000 feet of the finest merchantable timber in the world. At the present stumpage value of 65 cents per thousand feet, the standing timber of Washington is worth today $266,716,667. The value of stumpage in Washington is exceedingly low when compared with rates for stumpage in the older lumber states of the Union. In Minne-

sota stumpage is $2.87 per thousand feet; in Wisconsin stumpage is $3.69 per thousand feet, and in all the Middle States rates for stumpage are largely in excess of those charged in Washington today. It is not unreasonable to suppose that as the timber resources of the West are encroached on, the stumpage values in Washington will greatly increase, and the present valuation put on the timber still standing in the state must be regarded as an exceedingly conservative one.



BIG LOG, MOUNT VERNON, WASH.

The importance of the great timber belt of Washington can be better appreciated when it is stated that this state alone contains 56,873,000,000 more feet of standing timber than is found in the forests of all the Eastern and Southern states combined. The heaviest growth of timber in the state is in the counties situated in the northern portion of Western Washington and in those bordering on the Pacific ocean along the western coast. The best timber does not grow directly on the coast, but beginning at a point about one mile distant from shore line, a gradual improvement is noted in the timber, which continues to grow better in quality for several miles toward the interior. At the base of the Cascade range of mountains the timber again suddenly becomes larger and the growth is heavier than it is immediately to the west. It decreases in size as the ascent of the range is made, increasing again as the descent is made on the eastern slope. It is on the eastern side of the mountains and covering the foothills that the best timber of Eastern Washington is found. The great plains of the eastern part of the state are practically treeless. In but few parts of the state, however, is there a lack of sufficient timber for domestic use within easy hauling distance.

PHOTO BY PRATSCH & CO.

TIMBER FELLING NEAR ABERDEEN, WASH.

On account of the easy facilities enjoyed for shipment by both rail and water, nearly all the extensive lumbering operations in Washington are now carried on in that part of the state bordering on Puget Sound and the Pacific ocean. On the east side of the Cascade range in the state are 11,616,720 acres of forests which contain in round numbers 106,978,041,000 feet of timber. In the entire state there are only two counties out of the 34 that are without standing timber of some kind. These are the counties of Adams and Franklin both located in the eastern part of the state. These two counties adjoin each other and are exactly similar in their topography and character of soil.

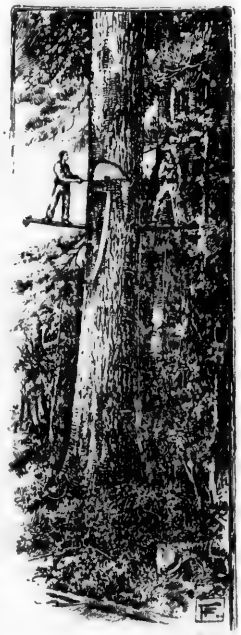
The present value of timber still standing in Eastern Washington is $80,427,000, and up to the present time this timber has been utilized almost solely for home con-

sumption. The lumber sawed in the western part of the state, however, has for many years past been shipped in large quantities to all parts of the United States and exported by the shipload to Europe, South America, the islands of the Pacific Ocean and Australia. Western Washington now contains the largest continuous belt of forest growth in the United States. This great unbroken and almost impenetrable forest, with its heavy undergrowth and windfall several feet in thickness, contains hundreds of trees to the acre, many of which are from 200 to 400 feet high. This forest stretches away from the waters of Puget Sound for miles eastward, practically to the snow-line of the Cascade Mountains, and between Puget Sound and the ocean to the west is a belt of timber thousands of miles in extent. Much of this vast forest contains trees so high, and so thick is the growth, that the sun never penetrates to its fastnesses. It is a forest of absolute and continual shade. Every acre of this timber belt contains thousands of feet of the finest timber, a source of wealth that will some day make this one of the richest states in the Union.

LOG CHUTE, 1100 FEET LONG. PUGET SOUND. WEIGHT OF LOG COMING DOWN, 8 TONS.

In some parts of Western Washington the timber is much thicker than it is in others. In Chehalis county, for instance, the forests will average nearly 32,000 feet to the acre, and in the same county are whole townships which will cruise from 6,000,000 to 12,000,000 feet to the quarter section. Another instance of extraordinary forest growth in the state is in Skagit county, where 16,000,000 feet of merchantable timber to the square mile is considered, by practical lumber men, as a conservative estimate of the forest growth. In either of the counties named above, or for that matter, in any of the counties of Western Washington, it is not difficult to find cedar trees from 12 to 21 feet in diameter, and from 150 to 375 feet high. The lowest limbs on these great trees are often 100 feet from the ground, One of these giants of the forest will furnish sufficient clear lumber or shingles to fill several standard railroad cars.

PHOTO. BY R. SHEANE.

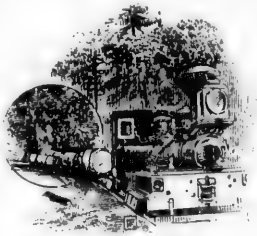


TIMBER FELLING NEAR CHEHALIS, WASH.

It is impossible to form any accurate estimate of the different kinds of timber still standing in the state of Washington. There has never been an effort made on the part of those who have cruised over this timber belt to segregate the different varieties in their reports. It can be safely stated, however, that fir constitutes about 60 per cent. of the forest growth of the state, while cedar, Washington pine (spruce), Alaska pine (hemlock), pine, ash, maple, alder, cottonwood, larch and oak follow in importance in the order named.

Growing side by side with the fir is the Washington cedar, which is the next abundant to fir here, and whose timber is second in importance to fir. While this tree belongs to the same family as the cedar of the Eastern states, it grows in the forests of Washington very differently from what it does farther east. Here it is straight from the

ground up, and is of immense size. In height it does not equal the fir, but its average diameter is much greater. The value of Washington cedar lumber has not until recently been fully appreciated, but as its durability, the ease with which it is worked and its beauty when properly finished have become better known, the demand for this lumber has greatly increased, and today Washington cedar lumber, as well as cedar shingles from this state, is an important article of commerce in the Eastern states. Shingles made from Washington cedar have attained a world-wide reputation. One of these shingles will last for 50 years, and as the average life of a pine shingle, under the best conditions, is not more than 10 years, it will be seen that the cedar shingle has a great advantage in the market. On the roofs of the cabins occupied by the early pioneers of Washington, from 1846 to 1852, may still be seen shingles as they were first nailed in position, and as sound as the day they were split from the timber.

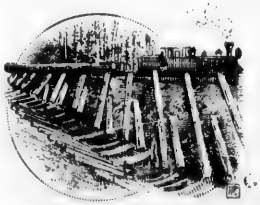


LOGGING TRAIN - PUGET SOUND.

In Western Washington is also found the Alaska cedar. This is a very valuable wood, but the supply here is limited. The only place in the state where it exists in any considerable quantity is in the recesses of the forests along the Olympic range of mountains between Puget Sound and the ocean. This cedar is of a very fine grain, it takes a very beautiful finish, and it is even valuable for the process of wood-engraving.

A species of cedar known to the trade as pencil cedar, is also found in the forests of Washington. While not as common as the red cedar of commerce, several tracts of this wood are scattered through the western part of the state, and the forests of this wood will, in time, prove very valuable. Florida is the only other state in the Union which contains this wood, and the available supply there now is all owned by a single great pencil manufacturer. The existence of this cedar in Washington is not generally known at the present time, but it is believed by the lumbermen of the state that this wood will be a staple article of export a few years hence.

The nomenclature of Washington's trees is liable to prove confusing to the reader who is not familiar with the different varieties of woods growing in the forests of the state. Owing to the great difference existing between woods of the same variety found in Washington and in the East, shippers of Washington lumber have found it necessary to preserve the identity of this lumber by attaching local names to the several varieties handled. Thus the fir of the Pacific Northwest is known to the Eastern trade as Oregon pine and Douglas fir, spruce is called Washington pine, and hemlock from the states bordering on the North Pacific Ocean as Alaska pine.

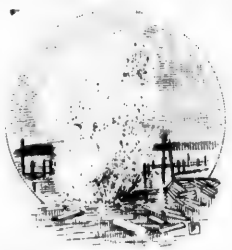


LOGGING - PUGET SOUND.
STARTING LOG DOWN CHUTE.

Washington spruce bears a close resemblance to the Eastern white pine. It is a perfectly odorless wood, is almost milk white, and is equally as soft as white pine. Up to the present time its use has been confined to the manufacture of boxes, store shelving and dairy furniture. Its entire freedom from even the least perceptible odor especially recommends this wood in connection with handling butter or milk. Washington spruce is now receiving attention from Eastern wagon makers with a

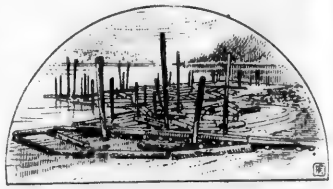
view to utilizing this wood largely for the manufacture of wagon boxes. Spruce is found in large quantities on lands tributary to Grays Harbor, Willapa Harbor (Shoalwater Bay), and the Columbia river.

Hemlock, or Alaska pine, is generally found in close proximity to tide water in Washington. The value of the hemlock forests of the state has heretofore been greatly underestimated by reason of the general, but erroneous, impression that the hemlock found here is identical with that found along the Atlantic coast, and is, therefore, much inferior to either the fir, the cedar or the spruce which Washington contains in such abundance. The hemlock of Washington is the *Tusqa Mertensiana* and is entirely distinct from the *Tusqa Canadensis*, or the common hemlock of the East. The Washington hemlock differs from the Eastern variety in both its botanical and its economic properties. It is not generally known that the hemlock forests of Washington contain fully one-fourth of the available tan bark of the United States. Pennsylvania at the present time is the leading state of the Union for the production of hemlock leather. Present statistics show, however, that within the next six years, at the present rate of consumption, the supply of hemlock tan bark in that state will be exhausted. It is perhaps a safe assertion to say that before the expiration of the next ten years tannin, manufactured largely from the hemlock bark of Washington, will be in great demand in both the United States and in Europe. Apart from the local requirements, a great and constantly increasing demand exists for hemlock extract all over the United States as well as for export to foreign countries. Germany alone imported 35,000,000 pounds of tanning extracts in 1892, and Great Britain is one of the largest consumers of tanning extract in the world. A number of tests made by leading and reliable chemists have demonstrated that Washington hemlock is the strongest bark of its kind on the continent, and that it contains a larger percentage of tannin even than the Pennsylvania hemlock bark, which has always, up to the present time, stood the highest in the market. These tests resulted in the establishment of a tannin extract company at South Bend, Washington. These works have a capacity of 150 barrels, or 75,000 pounds a week, and are being very successfully operated. Other tannin extract works will soon be put in operation in the state, and hemlock from Washington will soon become as staple an article of trade here as is the spruce or the cedar at the present time. The hemlock lumber is very valuable and is especially adapted for fine interior work and ornamentation. It is not to be compared with the fir in tensile strength or in durability when exposed to the weather, but it can be used for many purposes, and its value is becoming better appreciated with each succeeding year.



LOG FROM CHUTE STRIKING WATER. PUGET SOUND.

Of the other woods found in Washington's forests, pine is the most abundant. Yellow pine is a mountain wood as found in this state. It is plentiful in Eastern Washington and has all the characteristics of the Southern yellow pine. In the state are also scattered growths of ash, alder, cottonwood, oak, maple, poplar, tamarack, yew and willow. All these woods differ little, if any, from the same varieties



BOOM LOGS, LOWER END OF CHUTE-PUGET SOUND.

found in the Eastern forests. Another Washington wood is madrone, which is found along the coast in paying quantities. It is an exceedingly handsome wood and can be used with profit by wood-workers for various purposes. White birch, a very rare wood, is found in small quantities in Eastern Washington. It has attained but little value, commercially, up to the present time.

The last wood found in Washington's forests in sufficient quantities to call for mention in the present article is larch. This is a beautiful wood which grows in great abundance in the mountainous districts of the state. The tree attains a height of 150 feet and is from three to six feet in diameter. The wood is used for interior finishing and makes an excellent quality of sash and doors.

MOUNTAIN SCENERY NEAR VIENTO-COLUMBIA RIVER.

With all this great wealth of timber only awaiting the axe and the saw to be converted into marketable lumber, it is but natural that, dating from the time that the first pioneers settled on the shores of Puget Sound, the people of the state have largely depended on the forests of the state as a means of livelihood, and that lumber is today, as it will always be the leading industry of the state. With the exception of an occasional hunting or trading trip made by the hardy voyageurs of the Hudson's Bay Company, the forests of Washington remained undisturbed by the foot of the white man until the coming of the pioneer settlers to this part of the state in 1846. In that year the first sawmill in the state was built at Tumwater Falls, on the Des Chutes river, in Thurston county, by Captain Simmons. This was a primitive affair, and its market was limited altogether to the local demand. This, however, was the initial stage of the development of an industry that now represents millions of invested capital, and whose trade reaches to nearly all accessible parts of the world.

In 1853, Henry L. Yesler built at Seattle the first steam sawmill on the shores of Puget Sound. It would be a difficult matter for those acquainted only with the great and flourishing city of Seattle today, to realize the important part the small sawmill of Henry Yesler's played in the pioneer stage of the city's history. For years following its establishment it was almost the sole industry of the place, and it is possible that, through the establishment of this mill here, may be traced the primary cause which determined the subsequent supremacy of Seattle. In the '50's, Yesler's mill was the most important structure of the village of Seattle. There all the wage-earners of the place were employed; there the few ships that then visited Puget Sound came for cargoes and landed their freights of produce and merchandise. The mill occupied a long, low, rambling building, and had a capacity of 15,000 feet a day. Later other mills were established at this point and on other ports of the Sound. In 1867-68, Charles Hanson built the big Tacoma mill, which is still one of the leading mills of the latter city.

SCENE NEAR MOSIER-COLUMBIA RIVER.

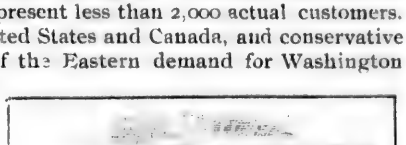
At the time of the establishment of the big mill at the present site of Tacoma, ships called occasionally at the ports of Puget Sound and carried away lumber to San Francisco and Australia. Mills began to multiply rapidly on the shores of the Sound and, by 1880, the output of lumber in Washington amounted to 160,176,000 feet a

year. More than half of this lumber found a market in San Francisco and foreign ports. No record of the output of the sawmills of Washington was kept in the years following 1880 until 1887. In the latter year the output was 600,000,000 feet, one-third of which was sent out of the state by vessel, and a small demand had been created in the East which was supplied by rail shipments. By 1890, the number of mills in the state had increased to over 200, and the output of these mills for that year was 1,000,000,000 feet. It was in 1890 that the first large shipments of lumber were made from the Washington mills to the Eastern states. Since that time freight rates have discriminated against Washington lumber shipments, but it can be but a few years in the future, at the most, when nearly all the lumber consumed in what are known as the Middle states and those of the Central West will be shipped from the mills of the Pacific Northwest.

HAULING LOGS NEAR SEATTLE.

Nearly one-third of the population of Washington at the present time is dependent on the industries of sawing lumber, shingles and wood-working plants, and a large part of the wealth of the state is derived from this source. The following statistics will be found interesting as showing the mammoth proportions which the lumber industry has assumed in the state during the last 10 years, and it will furnish a basis on which to make hopes for the future of this industry in the Northwest.

In 1892 the mills of Washington turned out 1,164,425,880 feet of lumber, 436,716,000 laths, and 1,883,868,750 shingles. The output of shingles for the year showed an increase of 957,000,000 over the output of 1891, while the output of 1893, exact figures for which are not obtainable this early in the year, it is expected will show a corresponding increase over the output of the year previous. This remarkable increase in a single year was due altogether to the growing popularity of cedar shingles in the East. It is now freely admitted that the Washington red cedar shingle is superior to any shingle in the market. At the present time only about one-twenty-fifth of the trade of the Union is supplied with Washington shingles. The 6,000 carloads of Washington shingles shipped East in 1893 represent less than 2,000 actual customers. There are now 50,000 lumber firms in the United States and Canada, and conservative shingle men do not believe that the limit of the Eastern demand for Washington shingles will be reached until at least one-half of the lumber dealers of the country are handling these shingles.



THE GREAT FLATHEAD LAKE, MONTANA.

The output of the Washington lumber and shingle mills finds its way to market through the medium of coasting and foreign vessels, and by rail to the East. The shipment of lumber and shingles from the state in 1892 was divided as follows: lumber to foreign ports, 105,002,710 feet; lumber to coast ports, 263,666,523 feet; shipments of lumber by rail, 100,650,000; shingles by rail, 913,300,000; shingles by water, 8,608,000. The foreign shipments were made to the ports of Europe, Asia, South America and Oceanica, while the coastwise shipments were made principally to Cali-

fornia and Mexico. A large fleet of sailing vessels is regularly engaged in the export Washington lumber trade, and the harbors at Seattle, Tacoma, Port Blakely and other milling centers of the sound contain ships at all seasons of the year and from all parts of the world loading with lumber.

The value of the output of the lumber and wood-working mills of Washington for 1892 was $19,000,000. This was subdivided as follows: Lumber, $12,481,543; shingles, $2,187,898, and manufactures of wood, $3,512,429. The capital invested in the lumber and wood-working plants of the state is over $30,000,000. These industries give employment to about 12,000 men, and they annually disburse in wages over $7,000,000. There are now in operation in the state 227 sawmills 246 shingle mills, and 73 sash and door factories. The sawmills have an aggregate yearly capacity of 2,970,000,000 feet of lumber, while the shingle mills of the state turn out annually 3,723,000,000 shingles.

LAKE CŒUR D'ALENE

Owing to the depressed condition of the lumber trade and the unsettled condition of the foreign market for lumber, the mills of the state did not run to their full capacity during the season of 1892-93. The mill men of Washington base great hopes on the completion of the Nicaragua canal to revolutionize the lumber business of the Pacific Northwest and cause Washington to take front rank among the great lumber-producing states of the Union. At the present time, owing to the great length of time it requires to ship a cargo of lumber from Washington around Cape Horn, the shipments of lumber from the state to the Atlantic seaboard are neither large in volume nor are they profitable. The lumber of Washington has no superior in the world, and when distances to Europe are lessened over 8,000 miles by the completion of the canal, it will easily drive all other lumber out of the markets of Europe and the Atlantic states.

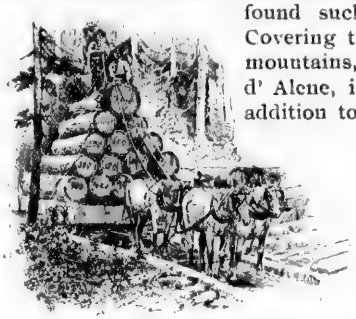
Great Britain alone now annually imports $75,000,000 worth of lumber, of which less than $150,000 worth comes from the Pacific coast. Other foreign nations import lumber in proportionate amounts. This foreign demand, together with the constantly increasing market in the Eastern states for lumber, will, in the near future, create a great demand for lumber sawed in the mills of the Pacific Northwest.

It may be interesting to call the attention of the readers of this article to the misleading statements scattered broadcast by certain misinformed persons to the effect that the forests of Washington contain sufficient timber to supply the world for 100 years in the future. The facts are that there is today just about sufficient timber in these forests to supply the trade now handled by the mills of the northern pine states for about 40 years, and on the entire Pacific coast there is now only sufficient standing timber to last 70 years at the same rate of consumption.

TIMBER RESOURCES OF IDAHO.—The forests of the state of Idaho it is estimated contain 30,000,000,000 feet of timber. This is double the amount of timber contained today in Minnesota, which now ranks as one of the greatest lumbering states of the Union.

But little lumber is now manufactured in Idaho, and its forests may be called vast timber preserves for the use of future generations. The most extensive forest growth of the state is in Shoshone and Kootenai counties. Around beautiful Lake Pend d' Oreille, in Idaho, and stretching back from this body of water for miles, is

a superb forest, in which gigantic trees lift their heads aloft to a height of over 200 feet. Nowhere else in the United States, except in the Pacific Northwest, can be found such prodigious amounts of timber to the acre. Covering the granite-ribbed slopes of the Cœur d' Alene mountains, and extending to the shores of Lake Cœur d' Alene, is another vast forest which makes an important addition to Idaho's timber wealth. An enormous amount of timber is also found fringing the numerous streams which wind among the hills of Northern and Central Idaho. The varieties of timber found in Idaho include pine, spruce, tamarack, oak, mountain mahogany, Juniper, birch, cottonwood, alder and willow.



LOGGING IN THE CŒUR D'ALENE DISTRICT.

TIMBER RESOURCES OF MONTANA.—Montana's pre-eminence as a mineral-producing state has detracted attention from its other natural resources. About 10,000,000 acres of Montana's mountain lands are covered by fine forests of pine, spruce, cedar and tamarack. It is estimated that these forests contain 75,000,000,000 feet of merchantable timber. This timber grows upon the rugged slopes of the Rocky Mountains and on detached clusters of mountains scattered here and there throughout the state.

While Montana exports but little lumber, it takes about 100,000,000 feet a year to supply the local demand. The greater portion of this lumber is used by the mines of the state. The Anaconda mine, at Butte, alone uses nearly 15,000,000 feet of lumber a year in timbering. A large quantity of wood is also used as fuel in the great smelters and quartz mills of the state. There are 102 sawmills and shingle mills in Montana, nearly all of which have a capacity under 10,000 feet a day. The largest sawmill in Montana is that of the Blackfoot Milling and Manufacturing Company, at Bonner. This mill has a daily capacity of 240,000 feet. Its yearly output is about 32,000,000 feet.

TIMBER RESOURCES OF ALASKA.—Alaska, bordering on the Arctic ocean, with one end experiencing the cold of almost perpetual winter and the other end of the territory seldom noting a temperature below the freezing point, contains a vast amount of standing timber. It is estimated that one-thirtieth of the entire territory is covered with timber. The timber belt of Alaska contains about 11,160,000 acres. At the low estimate of 6,000 feet of standing timber to the acre, Alaska contains today 66,960,000,000 feet.

The Yukon river, a wide and deep stream, flowing from the ice fields of the north through Alaska, is fringed for almost its entire length with a dense forest. Along the coast from the southeastern boundary of the territory to Kodiak Island, there is a continuous forest, except where mountain ranges over 2,000 feet high approach the water. On the islands of the Alexander Archipelago is a heavy growth of yellow cedar, from which a superior class of lumber is manufactured. These forests contain great trees six feet in diameter and branchless for sixty feet or more above the ground. The timber of the southeastern parts of Alaska consists of spruce, hemlock, yellow and red cedar, the woods being found in quantity in these forests in the order named above. The forests of the interior of Alaska extend as far

north as the range of mountains, from 50 to 100 miles distant from the coast. These forests contain spruce, hemlock, birch, poplar and other deciduous trees.

The principal woods of export of Alaska are Alaska cedar and hemlock, which is known commercially as Alaska pine. The cedar of Alaska is so fine grained that it can be used for wood engraving. It is susceptible of taking a high polish, and is well adapted for the manufacture of furniture and for interior finishing work. There are now 13 sawmills in Alaska. The output of these mills is used for local consumption, the government instructions preventing the shipment of lumber sawed in the territory beyond its limits. It is to these restrictions alone that the present stagnation in the lumber industry of Alaska is due. In 1890 Congress passed an act allowing one person to purchase 160 acres of land in Alaska at the price of $2.50 an acre. This act only applied to actual settlers on the land purchased. As none of the timber land of the territory has been surveyed, all parties now cutting timber on the government land of Alaska are trespassers. The great inland sea, extending from Alaska to the cities of Puget Sound, affords an easy means of shipping the lumber product of Alaska to an available market, and as soon as the government restrictions governing the export of lumber from the territory are removed, the lumber industry of Alaska will prove to be as great as is this industry today in the states of Oregon and Washington to the south.

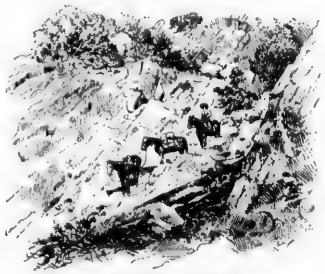
LUMBER RESOURCES OF BRITISH COLUMBIA.—It is not generally known that British Columbia contains more timber than the two states of Oregon and Washington combined. Of the total area of the province, 85,000,000 acres are classified as timber land. Estimating that the average amount of standing timber to the acre is 10,000 feet, a very small estimate, British Columbia contains today the enormous total of 850,000,000,000 feet. Where extensive logging operations have been conducted in the province, the standing timber has scaled more than 15,000 feet to the acre. If the average of standing timber in the province is as high as 15,000 feet to the acre, British Columbia contains today more timber than is found in the entire territory of the United States.

A PROSPECTOR.

The trees growing in British Columbia are of the same varieties as those found in the forests of Washington. Fir predominates, with cedar second in abundance. The lumber interest of the province at the present time is one of its principal industries. In 1892 the mills of British Columbia turned out 164,877,000 feet of lumber and 126,273,000 cedar shingles. Of the lumber product, 38,897,029 feet were shipped to foreign ports. Like Oregon and Washington, British Columbia finds a market for her lumber in Australia, South America and the Sandwich Islands. In November, 1893, a shipment of fir lumber was made from Victoria to the coast of Africa. Other shipments have been made from the ports of the province to England and parts of the Orient. A considerable part of the lumber manufactured in the province is shipped via the Canadian Pacific railway to the treeless plains of Alberta and Manitoba and even as far east as Quebec. Like the timber of Washington, that of British Columbia is unexcelled for general building purposes and is greatly superior to the timber which is cut east of the Rocky Mountains.

Mining in the Pacific Northwest—From the gold-impregnated sands of mountain streams and from the bowels of the earth are obtained the precious metals

which, after passing through the mints, become the money of the world. The use of gold and silver as money, the demand for the yellow and white metals in the arts and the waste of these minerals by the wearing effects of time, call for a never-ceasing source of supply of gold and silver. It is to meet this demand that the present great mining centers have been established, and the millions of dollars now invested in the mines of the United States shows a confidence of capital in the permanency of our mining industries that promises much for the future increase of mining operations in the Pacific Northwest.



A PROSPECTOR'S PACK TRAIN.

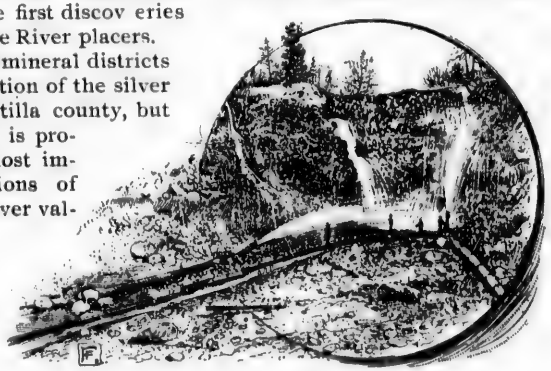
Countless fortunes have already been made on the Pacific coast out of mining. Throughout the Pacific Northwest today are many rich men who a few years ago were searching among the hills and gulches of this region for the yellow metal which is responsible for so much happiness and so much misery. These men formed a part of the army of argonauts who, reckless of physical suffering and danger alike, journeyed to the mountains of Oregon, Idaho and Montana from all parts of the United States. It was in the early '60's that the thousands of these adventurous spirits swarmed into the gulches of Idaho and Montana, and from these gulches was washed within the short space of a few years over $100,000,000 in gold. From the first discovery of gold in Montana to the present time, the humble miner has patiently prospected the mountainous regions of the states comprising the Pacific Northwest. He has fallen to sleep at night with the sky for a canopy and on the morrow has discovered the wealth to which he had devoted his life. Not all of these worthy men have been successful. All over the Northwest are nameless graves filled as the result of physical exhaustion and long deferred hopes in the mad rush for gold. The miner, like men in other callings in life, is forced to accept the issue of success or failure with a calm spirit. Like every calling, where success means a fortune, it claims the attention of thousands of men doomed to failure. The search for the yellow metal, however, possesses a fascination which binds for a lifetime lease the man who first looks for gold, and the success which a few men attain in the calling is an ever-present incentive for constant prospecting on the part of the miner, which alone leads to rich discoveries. It is the possibility of finding thousands of dollars, even millions, that urges the prospector to roam alone in the unbroken solitudes of mighty mountains never prospected before. It is this same spirit which induces capitalists to spend thousands of dollars in sinking shafts, running tunnels and doing other development work on promising prospects, the surface indications of these prospect holes indicating that immense stores of wealth may lie hidden below.

In recent years science has done much to remove the element of uncertainty from the development of a mine which was formerly connected with all mining operations. Practical mining men now assert that it is seldom that any considerable sum of money is lost in developing mining property. The profits of no other business are as great as are those of mining when intelligently conducted by men of large means. There are even today scattered throughout the Northwest hundreds of prospects which, if developed at the expense of a few thousand dollars, would prove fine paying properties. The one great need of any promising mining district is capital to develop its mines. A new mining district, however rich, is slow to enlist the attention of capital.

Yet, when once capital becomes interested in a mining section, its development is rapid and its prosperity is usually permanent. Quartz ledges now claim the principal attention of mining men and the development and subsequent working of a rich, quartz mine require years of constant work, which alone insures permanence to any camp in which quartz mining predominates.

The men who discover mines are usually improvident, and they are usually without money. They sell their claims in most cases for a small fraction of their value, and it is this which renders it easy for capitalists to invest in claims which give almost a positive assurance of turning out well. The Pacific Northwest is today, perhaps, one of the greatest mineral-producing regions in the world, and yet all mining men concede that the production of gold and silver in this vast territory is but a small part of what it will be in the near future. In 1892 the mines of the Pacific Northwest, independent of British Columbia, produced the enormous sum of $54,593,912 in gold and silver. It is not improbable that this output of precious metals in the Northwest will be at least doubled within the next few years. This, at least, is the opinion of careful and experienced mining men who are familiar with the mineral resources of the country. In the following series of articles on mining in the Northwest, full and reliable information is given on the mines of Oregon, Washington, Idaho and Montana, and reference is also made to the great mining districts of British Columbia and Alaska. This information has been gathered from personal visits to the mining centers of the Northwest; the figures have been taken from the United States official reports, and statistics given in these articles will be accepted by the world as positive evidence of the great and constantly increasing importance of the mines of the Pacific Northwest.

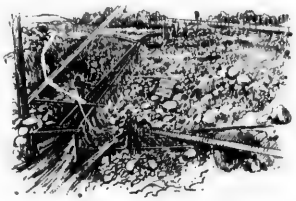
MINING IN OREGON.—Since the discovery of gold on the Rogue river in 1852, Oregon has been a steady producer of the precious metals. The mines of Jackson and Josephine counties alone have yielded since that time, some reports state, as high as $30,000,000 in gold. It was in these counties that the first mining in the state was done, and this section is now the scene of a mining excitement that equaled the rush of the early 50's when the "Argonauts" of California came over the Siskiyou mountains and made the first discoveries of the coarse gold of the Rogue River placers.



HYDRAULIC MINING—SOUTHERN OREGON.

Gold predominates in the mineral districts of Oregon, and with the exception of the silver output of the mines of Umatilla county, but very little of the white metal is produced in the state. The most important gold-producing sections of Oregon today are the Rogue River valley and the adjacent country, and the Blue Mountain region in the counties of Baker, Grant and Union, in Eastern Oregon. A large part of the gold mined in Southern Oregon is taken from the placers. Gold is found in nearly all the numerous creeks and large rivers of Southern Oregon. Along the Coast Range of mountains in this part of the state, evidences of gold appear wher-

ever the streams have cut their way through the sandstone to the more ancient formation of the rocks lying underneath. Trickling down this range are innumerable creeks which uniting form large rivers. The gravel in any of these streams shows traces of gold, and a color can be obtained from the gravel at any place along their course. This gold has been carried by the streams to the beaches of the ocean, and in a few places on the Oregon coast—notably in Coos and Curry counties—the black sand deposits are worked for the minute particles of gold which all this sand contains. This gold is found in considerable quantities, but it is so fine that it has never been possible with the machinery now in use to save but an exceedingly small part of the flour gold.



HYDRAULIC MINING.

Quartz mining began in Southern Oregon in 1860. Quartz mining in the state, however, has never assumed great proportions. This has been due to a number of causes. In the first place it has been easier to work the placers of Southern Oregon than it has been to develop the quartz ledges of this section. There has been a feeling among practical mining men that the quartz ledges of Southern Oregon were not continuous veins. During the past two years, however, some very rich ledges of gold quartz have been uncovered in the southern part of the state, and the working of these ledges has been attended with very profitable results. The recent decline in the price of silver has caused mining men to turn their attention more to the mining of gold, and as a result several gold properties in the state which have been allowed to lie idle for years were again opened up during the past year, and the development work already done on these properties has been of an encouraging nature to the mine owners.

Generally speaking the veins of gold quartz in the mines of Southern Oregon are of a "pockety" nature. Recent explorations of the mineralized area here, however, have disclosed several true fissure veins. In past years quartz mining has not been conducted by practical mining men in Southern Oregon, and but little effort has been made by these men to save the vast amount of gold contained in the sulphurets of these mines. The machinery by which the ores have been handled has been of a primitive character. The method adopted here for treating the ores has not been the one that is in use where operations are directed by scientific and practical mining men. Under these conditions mining in the southern part of the state has only been profitable where the percentage of free gold in the quartz was large. It is noticeable that where thoroughly experienced mining men of means have taken hold of any of the gold quartz ledges of Southern Oregon the results have been satisfactory, and it is this evidence of the richness of these ledges, when the ores have been properly treated, which must be taken as an index of the importance of the future mining interests of this part of the state. The present great drawback to profitable quartz mining in many of the different sections of Southern Oregon is the absence of complete and thorough apparatus for cheap milling. There are extensive deposits of low-grade gold-bearing ores scattered all over this district, and it is the opinion of experienced mining men that these ores could be profitably worked with the aid of good machinery.

There are now at least 25 quartz mines which are being worked in Southern Oregon. It is confidently believed that this number will be at least doubled during

the present year. The gold-bearing quartz veins in this section are found principally in formations of auriferous slate. Some remarkable "pockets" of placer gold have been found in the gulches here. In 1893, as high as $3,000 was taken off a strip of bed-rock 12 feet long and 8 feet wide. On Althouse creek, in Josephine county, some of the largest nuggets ever found on the coast were picked up. The largest of these nuggets was valued at $3,100, while others were picked up along the same creek ranging in value from $1,000 to $1,500 each. In 1892, according to the report of the director of the mint, the mines of Oregon produced $1,555,861.57. Of this amount, $1,491,781.39 was gold, and $64,080.18 silver. This represents an output of 72,165 fine ounces of gold, and 49,563 fine ounces of silver. Southern Oregon produced during 1892, $194,374.17 in gold, distributed by counties as follows: Coos $16,884.70; Curry, $2,991.40; Douglas, $15,251.26; Jackson, $41,773.25; Josephine, $72,293.47; Lane, $31,500; Linn, $13,680. Of this gold, $18,000 was taken from placer diggings by Chinese. These almond-eyed aliens are the most persistent of Western miners. They will plod along for years working placer ground that white miners have long since abandoned as worked-out diggings.

The two greatest producing mines of Southern Oregon in 1892 were the Annie Consolidated, with a yield for the year of $16,500, and the Occidental, which produced $15,000 of gold. Both of these mines are in Lane county. The Simmons and Cameron mine, in Josephine county, produced, during the same year, $14,707. The largest mine in Jackson county is the Ashland, with a yield for the year of $10,000. All of these are considered good paying properties.

PLACER MINING.

The Blue Mountain region, in Eastern Oregon, is the most promising and most productive mineral belt in the state. This is a country of metamorphic rocks, granite and gneisses, and basaltic lava. The basaltic rocks here contain no regular vein deposits, but occasionally they are found overlaid with detritus from older rocks carrying gold and constituting placers. Streams have, in many places, cut the lava sheet in this region and have exposed the underlying metamorphic rocks which contain the quartz veins from which the gold of this country is taken. At the higher elevations of the Blue Mountain range the lava sheet ceases, and in its stead metamorphic rocks and granite are exposed. The gold veins in this region occur in horn-blende, schist, mica schist, granite and slate. These are the most favorable formations for gold. A large quantity of gold is taken from placers here, and there is still considerable virgin ground unworked. It is believed by mining men, however, that this branch of mining here is not capable of further expansion, or even of maintaining its present relative importance to quartz mining. Unlike Southern Oregon, nearly all the gold produced in this region is taken from quartz mines. There are now a large number of producing and dividend-paying mines in this district, and hundreds of promising claims. The veins here are large; they are well defined; they go down to great depths and do not pinch out. The ore runs from free milling to base, and in value from what is considered low grade to rich ore, averaging $1,000 to the ton in gold. The Conner Creek mine in this district was the first productive quartz mine in Oregon. It has been in operation for 25 years past and is still producing. In 1888, a pocket of rich ore was uncovered in this mine which it took a year to extract, and which yielded a total of $104,000. Some of the rock in this pocket was worth $20 a pound.

As a rule the quartz found in the mines of Eastern Oregon is what may be termed low grade. In several of the so-called low-grade mines of this region, however, like the Connor Creek, exceedingly rich ore shoots are found. In 1892, the mines of Eastern Oregon produced $1,360,245.72. Of this, $1,297,409 was gold and $62,836 was silver. Of the silver, Umatilla county produced $53,640 of the year's output. Of this silver, $28,000 was taken out of Leap-for-Life mine, in Umatilla county. This is, today, the only large silver-producing mine in Oregon. Another silver mine in Umatilla county is the New Silver Bell, which yielded $6,150 in 1892. The Carbonate mine of the same county is a famous gold producer. Its ores also carry considerable silver. In 1892, this mine produced $53,400 in gold and $16,600 in silver.

Union is now the greatest mining county of the state, and its output is increasing at the rate of nearly $200,000 a year. In 1892, the precious metal yield of the Eastern Oregon counties was as follows: Union, $755,615; Baker, $370,843.72; Umatilla, $119,765; Grant, $53,820; Malheur, $55,900, and Wallowa, $4,300. With the exception of Umatilla, none of these counties produce a noticeable amount of silver.

The largest producing mines of this section and their output in 1892, were as follows: the Sanger group, at Sparta, Union county, $275,000; Carbonate, Pendleton, Umatilla county, $70,000; White Swan, Baker City, Baker county, $72,642; Bonanza, Baker City, $54,994; Little Pittsburg, Sparta, Union county, $45,000, and Dolly Varden, Sparta, $45,000. Eight other mines here produced in the same year $25,000 each. The Chinese were especially fortunate in Eastern Oregon during 1892, they having secured during that year about $150,000 in placer gold. The increased activity shown in the mines of Eastern Oregon in 1893 will, it is believed, result in a much larger output of these mines than was shown by the report of 1892. There are now few, if any, gold-producing regions of the West where capital can be more profitably employed than it can today in the promising mines of Eastern Oregon.

PROSPECTING, MONTANA.

Extending from Goble, on the Columbia river, to Oregon City, on the Willamette, are the low Scappose or Portland Hills. It was in these hills that iron ore was first discovered, in 1843. This discovery was made near the present town of Oswego, on the Willamette river, seven miles south of Portland. In 1866 a small blast furnace was erected at Oswego, by the Oswego Iron Company, of which the late W. S. Ladd was president. This furnace had a capacity of 10 tons per day, and it was worked successfully for 20 years. Its product of pig-iron was sold principally in Portland and San Francisco. In 1888 this plant was enlarged at a cost of $500,000, and a railroad was built from the blast furnace to the mines. The iron ore found in the Scappoose Hills is hydrated oxide of iron, commonly called "bog iron" or "brown hematite." It is known to mineralogists, however, as limonite. The lava rocks of Oregon are rich in iron, and it has been calculated that there is enough iron in the lava flows which nearly cover the state to form a solid iron plate 50 feet thick over all of Oregon. With the possible exception of rocks containing a large

proportion of magnetite, the volcanic rocks are practically worthless. In Southern Oregon are extensive deposits of magnetic iron ore. This ore is found in large quantities at Gold Hill, in Jackson county.

Copper is found in Southern Oregon, and an attempt was made to mine it near Waldo, in Josephine county. The value of this metal is now purely prospective, as Oregon cannot, at the present time, compete in the production of copper with the other great copper-producing districts of the United States. It is found in large quantities here, however, and these deposits may, at some time in the future, prove of great value.

In Douglas county, near the town of Riddle, are vast deposits of nickel. As yet no attempt has been made to extract and treat this ore, owing to the excess of silica it contains and the presumed high cost of smelting it. That these nickel mines are very valuable is not questioned by practical men. Ores of exactly the same character as are found here are now being extensively handled with profit in New Caledonia, and it is probably only a question of time until the nickel mines will be worked here with a profit.

PHOTO. PALAIS STUDIO.

PLACER MINING, MISSOULA GULCH, BUTTE, MONTANA.

Extensive coal measures are found in Oregon along the Coast range of mountains and along the western slope of the Cascades. In Eastern Oregon, throughout that portion of the John Day valley where tertiary rocks are found, coal indications are numerous. The principal deposits of coal in the state lie in the stratified rocks of the Coast range, where coal-bed indications are found extending south from the Columbia river to the California line. At Coos Bay coal has been mined since the early 50's, and the output of the mines here has found a market principally in San Francisco. This coal is a low-grade lignite, as is nearly all the coal found in Oregon. At Wilhoit Springs, in Clackamas county, is a large deposit of lignite lying in a horizontal bed of a uniform thickness of four feet. The quality of this coal is poor on the surface, but it improves with the depth of the ledge vein. In the Nehalem valley, and in other parts of Clatsop county, extensive deposits of lignite have been discovered, some of which are of a fair grade of coal. This field, owing to its proximity to Portland, is perhaps the most valuable in promise in Oregon. It is confidently believed that the future supply of coal for Portland will be obtained from this source, and the attention of capital has already been called to the splendid opportunity afforded for working these deposits. With the exception of the Coos Bay coal, there is practically no coal mined in Oregon today. Most of the coal that has been discovered in the state is not adapted to coking, but it makes a very satisfactory fuel for household use, and as depth is attained in the mines the quality of the coal found in Oregon will probably increase over the quality of the surface croppings. There is no reason to suppose that the coal fields of Oregon will not prove as valuable as the present great coal fields of Washington.

MINING IN WASHINGTON.—A combination of causes has conspired to prevent Washington from taking rank as one of the great precious metal-producing states of the Union The isolated location of several of its richest mineral districts and the lack of transportation facilities in other districts have retarded the development of numerous valuable properties in the state which promise to prove very rich on a fuller development. In connection with the mining industry of the state, however, one important fact must not be overlooked. This is that the rich mines of Northern Idaho and of the Kootenay district, in British Columbia, are really tributary to Washington. Spokane, for instance, enjoys most of the trade of the rich Cœur d'Alenes. The money made in these mines is invested largely in Spokane, and this city is also the outfitting point for the rich mines of British Columbia, to the north. Washington has profited largely by the development of mines in the adjacent territory.

1,000 FOOT LEVEL, LEXINGTON MINE NEAR BUTTE, MONTANA.

The construction of new lines of railroad in the state during 1893 furnished an outlet for two of the most promising mining districts of the West. The construction of these roads will result in more activity in these mining centers during the present year than has yet been noted in the mining history of the state. Mineral discoveries during recent years in the state, have demonstrated that Washington contains great fields of low-grade ores, both silver and gold, which can be worked at a profit with the aid of the latest improved machinery. In the Okanogan country are ledges of gold-bearing ore which, from surface indications, surpass in extent anything of the kind in the West. In other parts of the state are extensive deposits of high-grade gold and silver ores. Some of the most promising of these claims are located remote from railroad lines. It is but a question of time when many of these promising prospects, now lying idle, will be developed into good, paying mines. Capitalists, even today, are investigating the merits of nearly every mining camp in the state, and when their value is once fully determined, the development of the mines of Washington will be but a repetition of the history of the growth of the great mining properties of Montana and Idaho. Projects to build lines of railroad to the most promising camps of Washington are being considered. The completion of these lines would allow the shipment of ores from these camps to outside reduction centers where such ores, owing to the heavy expense of long hauls by horses, cannot be handled. There are today in Washington a score or more of mines from which the owners have not yet earned a dollar. Yet on the dumps of these same mines are thousands of dollars worth of ore which can be handled at a profit as soon as it can be hauled to reduction centers by railroads.

Washington is divided into two great natural divisions by the Cascade range of mountains. It is on the eastern side of this range that most of the best mining properties of the state are located. The mineral districts of the state have never been thoroughly prospected. The dense forest growth and almost impenetrable underbrush which cover the slopes of the Cascade Mountains, rich in minerals, have thus

far prevented extensive prospecting in these districts. Geologists, however, believe after a careful examination of the formation of the rocks on the slopes of the Cascades, that the mountains contain vast deposits of ore, which have never yet been uncovered. As the country is developed, these mineral ledges will be uncovered. The future of mining in the state can, at best, be only a matter of conjecture, but it is the freely expressed opinion of every practical mining man who has carefully looked over the ground here, that vast deposits of gold and silver bearing ore are hidden in the Cascade range of mountains within the state, and that it is but a question of time until these great storehouses of wealth will be opened for the profit of man.

In several of the non-producing mineral districts of Washington leads are exposed so that they can be followed with the eye for thousands of feet. In the rich Monte Cristo region, recently connected with the tide water of Puget Sound by railroad, are great parallel ledges which can be plainly seen as they ascend the mountain side. Gold is found on all the bars of the Columbia, Yakima and other rivers of the state. This gold, however, is in many cases too fine to allow the deposits to be worked with a profit. On the upper waters of the Columbia river placer mining has been carried on for years. Along the Columbia even today a large number of Chinamen work the deposits of the river with profit. During 1893 these Chinese miners took out about $42,000 in gold from the Stevens county placers. These Celestials work patiently at this work for wages that would discourage a white miner, and it is the small pittance on which they can live that allows the China- man to work in these diggings where a white man would suffer privation at the same kind of work.

MARBLE LEDGES NEAR SPOKANE.

Of the gold now produced in the state of Washington over two-thirds comes from the placer mines. The report of the director of the mint shows that in 1892 Washington produced $373,533 of gold and $195,949 of silver. Of the silver output, the Ivanhoe mine, in the Okanogan country, produced $79,369, and the Old Dominion, of Colville, yielded $100,000. The total mineral production of the state came from six counties as follows: Garfield, gold $73 500, silver $10,500; Kittitas, gold $169,203, silver $3,486; Lincoln, gold $17,000; Okanogan, gold $10,250, silver $79,519.28; Skagit, gold $40,600; Stevens, gold $63,000, silver $102,444.58. This represented 18,071 fine ounces of gold and 151,557 fine ounces of silver.

In Western Washington the most promising mining camps are located near the summit of the Cascade Mountains in the counties of King and Snohomish. Of these the Monte Cristo camp is situated in a huge basin on the headwaters of the Sauk river. The principal ledges in this camp are found running in continuous and almost parallel lines, through mighty clefts that have been carved out of the mountains by glaciers. The bottom of the gorges of the Monte Cristo district lies at an elevation of 2,100 feet above the level of the sea, while the mountains on either side rise to an additional height of 3,000 feet. The mineral ledges in this district lie exposed on the mountain side. Nature has already done a large part of the necessary development work on these ledges, and but little remains for man to do here but to shovel out the ore and reduce it. The original discovery of the Monte Cristo camp was made from a point 15 miles distant with the aid of a good field glass. The

ores in this camp are generally base, bearing sulphurets of iron and galena, with a showing of zinc. Parallel with nearly all the veins of galena in this district are bodies of iron pyrities frequently mixed with porphyry. These ores carry from $8 to $55 a ton in gold, and from 10 to 75 ounces in silver, and from 14 to 70 per cent. lead.

COLUMBIA RIVER, BELOW THE CASCADES.

In Washington the most promising camps are located near the summit of the Cascade Mountains, in King and Snohomish counties. In 1893 a syndicate of English capitalists expended $5,000,000 in opening the Monte Cristo district and in building the Everett & Monte Cristo railroad from tidewater to the mines.

On a high divide from the Monte Cristo mines is the Silver Creek mining district. This is about eight miles in length and about three miles wide. The formation in this district is granite, porphyry and metamorphosed slate. The ores are galena, with iron and sulphurets of copper carrying gold, silver and copper. The principal mines in this district are the Oro Fino, Rattler, National, Morning Star, Vandalia, Jumbo, Winner and Webster. These mines have all been developed to some extent and the ores they produce average about $40 a ton in value. In what is known as the Anaconda group, in this district, a nine-foot vein of ore has been exposed which assays 11 per cent. in copper.

The Cascade mining district is located in the western part of Skagit county on the headwaters of the Cascade river. The ledges in this district are extensive and well defined. The principal mine is the Boston, which produces a galena ore assaying 60 per cent. lead and 50 ounces in silver. Another mining district of Western Washington, not yet sufficiently developed to show its permanent character, is the Snoqualmie, situated on the western slope of the Cascade Mountains, in King county. There are two large bodies of copper sulphuret ore in this district which assay from 5 to 20 per cent. copper in the outcrop. The character of the ores found in this district is free milling, together with sulphurets, concentrates and smelting ores. Samples of galena ore have been assayed here which run from 20 to 60 per cent. in lead and from 20 to 200 ounces in silver to the ton. The Green River country, a recently discovered mineral district, is located near the foot hills of Mt. St. Helens, and is reached from Winlock on the main line of the Northern Pacific railroad between Portland and Tacoma.

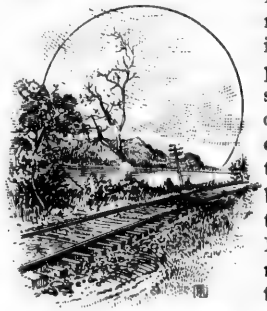
The principal placer mines in Washington are on Swauk creek, a tributary stream to the Yakima river in Kittitas county, 25 miles north of Ellensburgh. The gravel in the Swauk district is spotted and the pay dirt is found in streaks. This dirt is in places very rich in coarse gold. Nearly all the mines here are owned and operated by individuals. Nuggets worth, respectively, $500, $400, $325, $110 and $49, have been found in this district. Separated from Swauk creek by a low divide is Peshastin creek. This camp consists of free-milling gold-quartz ledges. It is admirably located, with an abundance of water and timber. One 40 and one 20-stamp mill are in operation here. This district has recently attracted the attention of capitalists and it is being rapidly developed. The average working value of the Peshastin ore is estimated at about $35 a ton. The ledges are well defined and in many instances free gold is seen in the rock with the naked eye. To the northwest of the Peshastin is what is known as the Cle Elum district. A large number of loca-

tions have been made in this district, and it contains several developed mines which yield from $5,000 to $30,000 a year each. Assays show that the ores from these mines run from $20 to $45 a ton in gold. In the mountains at and near the Cle Elum district are extensive deposits of copper, iron and low-grade galena ores. In one place there is a three and one-half foot vein of galena carrying 50 per cent. lead and 12 ounces in silver. There is a peculiar formation, covering about 2,500 acres in this district, where the country rock will assay from $1.50 to $6 per ton silver. There are mountains of iron ore in this locality, and the country within a radius of many miles seems to be a mineralized area.

About 80 miles north of Spokane, in Washington, and on the line of the Spokane Falls & Northern railroad, is the Colville mining district. The Old Dominion mine here is six miles east of the town of Colville. This is the greatest producing mine in the state of Washington. It was discovered in the spring of 1885, and since July of that year it is estimated that about $900,000 has been produced by the property. A six-foot vein of ore is now being worked in this mine. This ore averages 70 ounces in silver to the ton, and about 65 per cent lead. On the mountains adjacent to the Old Dominion mine are many promising prospects in various stages of development. Another large mine here, which is near Colville, is the Dead Medicine. The ore from this mine runs from 40 to 50 ounces in silver to the ton, and about 50 per cent lead.

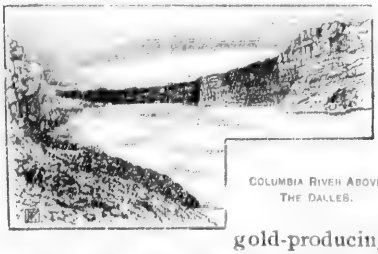
About 20 miles north of Colville, in Washington, is the Metalline district, where extensive deposits of low-grade ores have been discovered. Twenty miles east of this district is Northport, a station on the line of the Spokane Falls & Northern railroad. At this latter point a large smelter is now being built. This smelter will greatly facilitate mining operations in the Colville and neighboring districts, and it will also be largely patronized by the numerous mines in British Columbia to the north.

North of where the mighty Columbia river winds 2,000 feet below the summit of the plateau of the Big Bend country, is the Okanogan country with its beautiful lakes, picturesque valleys, and vast deposits of precious metals. Long before Washington became a separate political division of the Union this region was known under the name it now bears. In 1889 it was made Okanogan county, and it is now the largest political division of Washington. In area it equals three states of the Union, and it is one of the coming rich sections of Washington. Okanogan county is made up of a series of undulating plains, fertile valleys and hills. These hills terminate on the northern, northwestern, and western borders of the county in a broken chain of mountains. In the early 60's prospectors working their way east from the Fraser river discovered placer mines in the Similkimeen river. A great deal of gold was subsequently taken from the bars along this stream. The placers here becoming exhausted, the country was again left in solitude. In the 70's men again visited the Okanogan country, and these men discovered in the district a ledge of galena ore. Five hundred pounds of this ore were shipped to San Francisco for treatment. This was the first silver produced from ores taken out of the state of Washington. In 1883 considerable prospecting was done in the Mount Chapaca and Similkimeen dis-



UNION PACIFIC TRACK, NEAR VIENTO, COLUMBIA RIVER.

tricts, but it was not until 1886 that the big rush to this section began. This stampede was made to what is known as the Salmon River country. As a result of this rush the towns of Ruby, Loomiston, Golden and Conconnully were established. The latter is the present county seat. It was not long before the numerous prospectors who had flocked to this country began to make discoveries of exceptionally rich ledges of gold and silver quartz. These finds extended through a large area of territory. That Okanogan is the richest and most promising mineral district in Washington is now thoroughly established. The recent rich gold strikes made upon Palmer Mountain and other localities of the district, indicate that it will soon become the greatest gold-producing district of the West. All kinds of ores, from base to free-milling, are found in this district. Prior to 1893 the country had no rail outlet. The completion of the Great Northern, however, which forms connection with the boats plying on the Salmon and Columbia rivers, now furnishes the district with transportation facilities which, although inadequate to the needs of the country, have done much to hasten its development.



COLUMBIA RIVER ABOVE THE DALLES.

The Chelan mining district lies in Okanogan county, immediately adjacent to Lake Chelan. The first important discoveries made in this district were in 1889. Two of the claims then located here were subsequently sold for $30,000. Numerous mineral locations have since been made in the Chelan district, and with proper transportation facilities, which it does not now possess, the district will become a large silver and gold producer. The formation of this district is principally granite, cut by veins of porphyry dikes. These vary in width from 3 to 30 feet.

The principal mining districts have all been touched on in the article above. These districts contain millions of tons of gold and silver-producing ore, which can be handled at a profit by capital and with the aid of improved machinery. The rapid development of the mines of Washington during the past few years but presages the future growth of the mining districts of the state, and while the state will doubtless never rank with Montana as a mineral producer, mining will always be one of the most profitable industries of Washington.

DR. W. BREDEMEYER—There is a fascination surrounding the life of a mining engineer that seldom allows anyone engaged in that profession to forsake it for some other calling. Many interesting narratives could be written from the experiences of the men who are devoting their knowledge and energy in an effort to develop the great precious metal-producing regions of Washington. Dr. W. Bredemeyer, of Tacoma, is the oldest mining engineer in the West, he having had over 30 years' experience in the mines of Europe, Asia and America. During the past 22 years, Dr. Bredemeyer has been identified with nearly all of the great mining enterprises of the West. For a number of years he held the important position of United States mining commissioner for Utah. Before coming to America he was for a time in charge of the famous Banketon mines, in the Dutch Indies. Later he developed the first mine in Burmah, and was also the first white man to make a scientific exploration of the interior of China and Japan. He received an appointment from the government of Japan as the chief engineer of the southern district of that empire, a position he held for two years. Dr. Bredemeyer is a member of all

the leading scientific societies, and is also an expert on all questions relating to mining. His laboratory at Tacoma is the most complete on the coast.

MINING IN IDAHO.—Since the discovery of gold in Idaho by Capt. James Pearce and party, on Oro Fino creek, in 1860, the mines of this state have produced about $180,000,000. In 1861, a report became circulated through the Western states with astonishing rapidity that fabulously rich placers of gold had been discovered on Salmon river, in Idaho. These greatly exaggerated stories caused one of the wildest stampedes known in the history of mining on the coast. Thousands of miners and adventurers flocked to the Salmon River country. The later arrivals in the diggings finding the best claims already occupied, spread out over the adjacent country and discovered the famous placers of Grasshopper creek and Alder gulch, Montana.

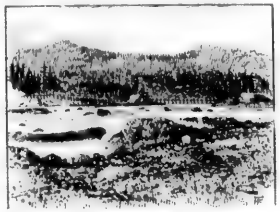
The most famous of the early placer mines of Idaho were those of Florence, Elk City, Warrens, Salmon river and Oro Fino. These camps produced millions of wealth in the early 60's, and they are still adding annually several hundred thousand dollars to the wealth of the world. Idaho county, in which these mines are located, leads the other counties of Idaho in the production of gold dust. Mining is now the principal industry of Idaho, and the state ranks fifth in the list of precious metal-producing states of the Union.

The labor troubles in the Cœur d'Alene mining district, in Northern Idaho, together with the decline in the price of silver, combined to cause a considerable falling off in the output of silver for the state in 1892 over the output of the previous year. The leading question among the miners of the state during the past two years has been how to work their properties, which are principally silver and lead-producing, at a profit, in view of the prevailing low prices of silver and lead. Idaho has already turned out millions of dollars in gold, and there are some very rich mines of the yellow metal in the state, but the heavy mining operations in this part of the West, as before stated, are now confined to the silver-producing properties, and it is the silver mines that the people of Idaho lean on for future activity in the mining properties of the state.

The most extensive mines in the state are those which carry an average grade of ore. Such mines as the Poorman, Tiger, Black Bear and other well known properties produce on an average from 27 to 29 ounces of silver per ton, and the lead averages about 57 per cent. The heavy mine owners of the state are firm in the belief that the only relief they can reasonably look for during the present low prevailing prices of silver lies in a general reduction of freight rates by the railroads which haul their ore to market. The mine owners of Southern Idaho have a great advantage over the owners of mining properties in the Cœur d'Alenes and other districts of the northern part of the state. The Southern Idaho mines carry a higher percentage of gold than the mines to the north, and the cost of working the mines in Southern Idaho is less than it is in the heavy silver properties of the Cœur d'Alene district. This applies, especially, to the De Lamar, Black Jack, Trade Dollar and Ralph mines, in Owyhee county.

HOPE STATION, LAKE PEND D'OREILLE.

According to the report of the director of the mint the mines of Idaho produced, during 1892, gold to the amount of 83,271 ounces, valued at $1,721,364; silver, 3,164,269 ounces, coining value $4,091,083; lead, 51,322,263 pounds, commercial value, $2,001,568. The product of gold and silver in Idaho, by counties, during the calendar year 1892, was as follows: Gold—Ada county, 272 ounces, value, $5,623; Alturas, 1,102 ounces, value, $22,780; Bingham, 436 ounces, value, $9,013; Boise, 18,209 ounces, value, $376,413; Cassia, 714 ounces, value, $14,760; Custer, 1,166 ounces, value, $24,103; Elmore, 5,870 ounces, value, $121,344; Idaho, 7,140 ounces, value, $147,597; Lemhi, 12,467 ounces, value, $257,716; Logan, 776 ounces, value, $16,041; Owyhee, 23,244 ounces, value, $480,496; Shoshone, 11,000 ounces, value, $227,390; Washington, 875 ounces, value, $18,088. Silver—Ada, 118 ounces, coining value, $153; Alturas, 700,362 ounces, coining value, $905,498; Bingham, 48 ounces, coining value, $62; Boise, 163,368, coining value, $211,218; Cassia, 50 ounces, coining value, $65; Custer, 397,360 ounces, coining value, $513,747; Elmore, 1,80[illegible] ounces, coining value, $2,332; Idaho, 5,061 ounces, coining value, $6,543; Lemhi 2,457 ounces, coining value, $3,177; Logan, 1,168 ounces, coining value, $1,510; Owyhee, 645,569 ounces, coining value, $834,656; Shoshone, 1,195,904 ounces, coining value, $1,546,184; Washington, 51,000 ounces, coining value, $65,938. The total value of the gold and silver output of the state, by counties, in the same year, was as follows: Ada, $5,776; Alturas, $928,278; Bingham, $9,075; Boise, $587,631; Cassia, $14,829; Custer, $537,850; Elmore, $123,676; Idaho, $154,140; Lemhi, $260,893; Logan, $17,551; Owyhee, $1,315,152; Shoshone, $1,773,574; Washington, $84,026. The gold and silver bullion produced in Idaho, and deposited in government institutions during 1892, amounted to $725,124.97 in gold, and $16,865.50 in silver.

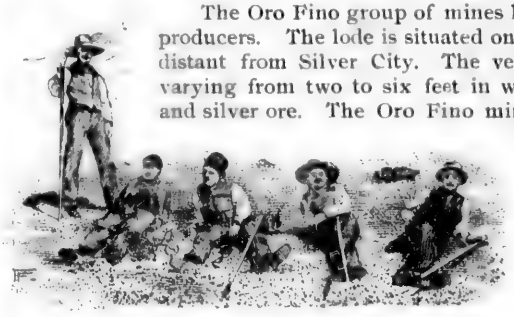


RAPIDS OF THE CASCADES—COLUMBIA RIVER.

Idaho is one of the richest states in the Union in silver and lead ore deposits, and many of these valuable properties are now lying idle awaiting the rise in silver to insure their being worked at a profit.

In Shoshone county are located the famous Cœur d' Alene mines which are fully described in a separate article in "The Handbook. The rich mines adjacent to Boise City also receive mention in another part of this work. Lying in the southwest corner of Idaho is Owyhee county, which for many years was the greatest mining camp in Idaho. Nine miles from Silver City, the principal town in the county, is Jordan creek, where are located the famous Owyhee mines. The lodes here cover an area of 20 square miles. They were first discovered in 1863. These veins vary in width from 2 to 60 feet, while the ore they carry assays from a trace of gold or silver up to thousands of dollars a ton. Up to 1876 this was one of the liveliest camps in the West. The mines here, in the 13 years following their discovery, produced over $26,000,000 in wealth. Upon the collapse of the Bank of California, of San Francisco in 1876, capital was withdrawn from these mines and the camp has been supported since that time by the individual miners who have resided here. These mines are still large producers. In 1892 they yielded $1,315,152. This was an increase of nearly $1,000,000 over the output of these mines in 1889. At this rate of increase the camp will soon surpass its record of its palmiest days. The Wilson mine in this camp is probably the largest and richest mine in Idaho. There are three veins in this location, though from the formation the mine looks as though it were a moun-

tain of quartz mineralized. The veins of the mine are respectively 15, 30 and 77 feet in width. There is a 20-stamp mill on this property, which produces over $500,000 in gold every year. It is estimated that in the group of mines of which the Wilson is the chief, there is now over $1,000,000 worth of gold quartz in sight.



MT. HOOD-CROSSING ASH BEDS, NEAR SNOW-LINE.

The Oro Fino group of mines have long been noted as great gold producers. The lode is situated on War Eagle Mountain, three miles distant from Silver City. The vein of this group is a true fissure, varying from two to six feet in width. It carries free-milling gold and silver ore. The Oro Fino mine has produced in the past over $1,800,000 and it is still yielding thousands of dollars annually. At Silver City the Oro Fino Mining Company have in operation a 20-stamp steam quartz mill. The Poorman group of mines in this district is composed of eight or ten lodes. The Poorman, the principal mine of the group, has yielded over $1,000,000. Another fine property here is the Empire mine, which is developed by a shaft about 700 feet deep. The Black Jack mine here has yielded over $300,000. The vein of this mine averages four feet in width and is encased in porphyry. Other valuable producing properties in this district are the Stormy Hill, Mahogany, Morning Star, Seventy Nine, Phillips and Sullivan, and the Summer Camp group of mines.

In 1866 a party of prospectors discovered rich placer diggings in Lemhi county in the basin of the North Fork of Salmon river. Since that time the county has been a steady producer of gold. Lemhi county contains several very rich and promising gold districts whose output would doubtless be greatly increased if the county had rail transportation to outside points. On Naplus creek and its tributaries, which are near the town of Leisburgh, over $10,000,000 has been taken from placer mines. The most notable placer mine now producing in the county is on Moose creek. It is estimated that this property has produced over $500,000. The owner of this mine estimates that he has over $1,000,000 remaining in the gravel to be taken out of these placers. There are hundreds of quartz claims in Lemhi county, some of which have already been developed into valuable producing mines. Of these mines the largest are the Kaintuck, Grunter, Yellow Jacket and Viola groups. Connected with these mines are three 10-stamp mills. The leads in this district are all well defined and are of permanent character. The ore runs from $5 to $70 per ton in gold, and in some of the richest mines of the district as high as $150 a ton. The principal silver mines in the district carry ores assaying from 15 to 40 ounces in silver and 70 per cent. lead.

Another canon in Idaho, remote from railroad lines, is that of Custer county. This is one of the largest and richest mineral districts in the West. The mineral belt crossing the western portion of Custer county is at least 100 miles in length and 50 miles wide. It is interspersed with veins carrying gold and silver ores all along its entire length. There are nearly 150 developed mines in this district and fully 2,000 promising prospects. The most prominent among the mining districts of Custer county are the Lost River, Yankee Fork, Bay Horse, Kinsman Creek, Squaw Creek and East Fork districts. A 40-ton smelter is situated in the Bay Creek dis-

trict and in the other districts are three quartz mills, three concentrators and two smelters.

MINING IN MONTANA.—In the Summer of 1852 Francois Finlay, a half-breed, from the Red River of the North, while on his way homeward from a trading trip to California, wandered into what is now Deer Lodge county, Montana. It was in this part of the present great state that Finlay first noticed coarse flakes of gold glittering in the gravel of what is now known as Gold Creek. He washed out here about two ounces of gold dust. This was the first discovery of gold in Montana. It attracted but little attention from the few mountaineers then in the territory and mining in earnest in the territory did not commence until 1861, nearly 10 years after the first discovery of the yellow metal was made here.

MOUNT HOOD—GREAT SLOPE TOWARDS SUMMIT.

In the latter year James and Granville Stuart prospected Gold Creek, the scene of Finlay's first discovery. They found gold here in paying quantities. They wrote to their brother at Pikes Peak of the find. The information which this letter conveyed was the immediate cause of the first great stampede to the Montana gold fields. Since the Stuarts uncovered bedrock of the placers of Gold Creek the mines of Montana have added nearly $400,000,000 to the wealth of the world. Now nearly one-third of all the gold, silver, copper and lead mined in the United States comes from Montana. This is pre-eminently the greatest mineral-producing state in the Union. Mining is its leading industry. In some of its many phases the industry of mining enters into nearly every department of trade here. It represents a large proportion of the aggregate wealth of the state.

Only a few of the many great fields of precious metals in Montana have yet been explored. On almost every mountain of the state and in nearly all the gulches are rich prospects that only await the advent of capital to develop them into great bonanza mines. Practical mining men, familiar with this field, believe that the quartz ledges of Montana have yielded up but a small part of the hidden wealth they contain. Mining, when conducted on scientific principles and as a cold matter of business, is not the uncertain and speculative calling it is popularly supposed to be. Where ore is found cropping out of the mountain sides the experienced miner can tell by an examination of the formation of the surrounding land and by its deposits of rock whether the lead is of sufficient extent to justify the employment of capital to develop it. In many instances immense sums are expended on the development of promising prospects before the mine pays a dividend. In Montana there are few recorded instances of any considerable sums of money having been lost in the development of mines. It is true that occasionally a prospector will make what he believes is a bonanza strike, and with the blind confidence of his class will labor hard for months to develop his claim until he is finally brought to realize that his find is worthless. Capital, however, is seldom extensively invested in a mine unless its value has first been determined and its promised output accurately estimated.

There is no better field for the profitable investment of large sums of money than is afforded in the gold, copper and lead districts of Montana. The state is a great silver-producing district. Owing to what the people of Montana feel has been

adverse legislation to the silver interests, mining men of that state are now turning their attention to the development of its many rich gold and copper properties.

The discovery of gold on Salmon river, Idaho, in July, 1861, attracted thither from Colorado and other territories a large immigration. The late arrivals finding the diggings here occupied began to spread out over the adjacent territory. In 1862 the great bonanzas of Grasshopper creek were discovered, and as a result the town of Bannock sprung into existence. By the 1st of January, 1863, a population of 500 men had gathered at Bannock, and among them were many wild and reckless adventurers, whose names and misdeeds figure prominently in the early history of the territory. With the discovery of Grasshopper Creek placers, commenced the first important mining operations in Montana. The fame of these diggings soon spread throughout the West, and it occasioned a great stampede to Montana. In the seven years following this discovery the placer mines of Grasshopper creek yielded $2,245,000 in gold.

MOUNT HOOD-DEWERT PARTY ON SUMMIT.

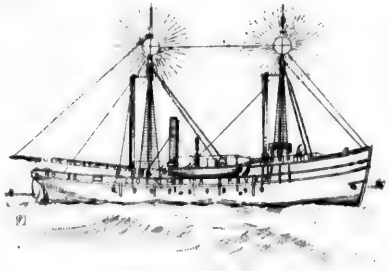
On the 1st day of February, 1863, William Fairweather and others left Bannock to prospect the Big Horn Mountains. They were driven back by the Crow Indians. Returning homeward the party camped at noon on Alder creek, 75 miles east of Bannock. While the midday meal was being prepared Fairweather, to the amusement of his companions, began to wash a few pans of gravel in the creek. To his great surprise he obtained 30 cents worth of gold from the first pan, and over $2 worth in subsequent pans, before he was through experimenting. Thus was the famous gulch discovered. It is estimated that Alder gulch has yielded fully $70,000,000 in gold. Of all placer fields this was the greatest ever discovered in the West.

Twelve years after Alder gulch was discovered Bill Fairweather, after having made and spent a fortune, died penniless. This was the end of a man who had turned the key which unlocked millions in wealth for others. It was on Alder gulch that Virginia City was built. This town was for years the political and commercial capital of Montana. During its palmiest days of 1864-5, it contained over 10,000 population. This large population was ruled and robbed with impunity by one of the most depraved and blood-thirsty gangs of villains that ever infested a civilized community. In less than eight months this gang murdered 102 inoffensive citizens; they shot and wounded scores of others, and it is supposed that many of the murders they committed were never traced to their daring. Henry Plummer, one of the most polished and dangerous villains known in the annals of crime, was the leader of this gang, and he was, up to the time of his execution by the vigilantes, the sheriff of Montana. Early life in Virginia City is fully described in an article in this publication on the vigilantes of Montana.

The next important discoveries of gold in the territory were made by John Cowan and three companions, in the fall of 1863, on a small tributary of Prickly Pear. Here they found pay-dirt yielding from 40 cents to $1 a pan on bedrock. They named the locality Last Chance gulch. A stampede followed these discoveries, and it was here that the foundation of the present great city of Helena was laid. In five years Last Chance gulch yielded over $15,000,000 in gold. The yield of Lewis and Clarke county, of which it is a part, was $19,360,000 between the years

of 1864 and 1869. Many of the largest and most imposing business blocks of Helena are built on the worked-out placer ground of the gulch.

The last extraordinary find of gold in Montana was made in Confederate gulch, Meagher county, in the winter of 1864-5. Some of the claims in this gulch were phenomenally rich. On Montana bar several claims yielded as high as $180 to the single 10-quart pan of dirt, and in one instance a pan of gravel yielded $1,000 in gold. In the fall of 1866 a four-mule team hauled from Fort Benton, for transportation down the Missouri river, 2½ tons of gold, worth $1,500,000. Nearly all of this gold was taken out of Montana bar and Confederate gulch.



U. S. LIGHTSHIP, MOUTH OF COLUMBIA RIVER.

In all there are about 500 gold-bearing gulches in Montana. These vary from one-half mile to 20 miles in length. In addition to these gulches are numerous bars rich in gold. The gold found here varies in size from microscopic powder to nuggets weighing 30 to 40 ounces each. It varies from 600 to 990 in fineness. One nugget was found in Snow-shoe gulch, in the territory, in 1865, which weighed 178 ounces, and which was worth $3,200. Other large nuggets of gold, worth respectively $2,073, $1,800, $475, $375 and $556 were found here between 1865 and 1880. The most famous of Montana placers have yielded the following amounts in gold: Pioneer, Independent and Gold creek, $13,000,000; Alder gulch, $70,000,000; Confederate, $4,000,000; Last Chance, $15,000,000; Grasshopper creek, $5,000,000.

An interesting relic of early placer mining in the territory is a bill of goods purchased at Florence City, in 1861, of which the following is a copy: 100 lbs. beans, at $1.25 per pound, $125; 300 lbs. flour, at $1 per pound, $300; 11 lbs. coffee, at $1.25 per pound, $13.75; 300 lbs. beef, at 25 cents per pound, $75; 9 lbs. beans, $9.50; 3 sacks salt, $12; 1 bar soap, $3; 10 lbs. sugar, at $1.50 per pound, $15; 25 lbs. bacon, at $1.25 per pound, $31.25; 1 paper saleratus, $6. The total price of this purchase was $595.50.

Placer mining is still extensively carried on in Montana, but it does not now possess its former magnitude and importance. When the bonanza placers of the territory began to decline, miners here began to look for the source of the placer gold which had been found here in such large quantities. It was not long before a number of mother lodes were discovered as a result of this search. The industry of quartz mining in Montana was started in a small way, owing to the lack of proper transportation facilities, and also the lack of large works for the reduction of the ores of the mines. The early quartz mines worked in Montana were free-milling properties, and all the precious metal which the ore contained was extracted at the mine. In subsequent years this industry developed here into one of great magnitude, and now Montana derives the greatest portion of its wealth from its quartz properties. A marked difference between the mining of gold in quartz and from placers is that placer mining is largely carried on by individuals, while nearly all the large quartz mines are owned by corporations capitalized for from a few thousands of dollars each to millions of dollars. The development of a placer mine represents usually the amount of hard labor alone that is put upon it by the owner

and his few assistants. A bonanza quartz mine, on the other hand, is developed at a cost of hundreds of thousands of dollars, and is often operated, when fully developed, by hundreds of men. Thus it will readily be seen that extensive quartz mining incurs vast outlays of money for labor, machinery, etc., and it is this industry which insures stability to a mining section in the development of its many resources, aside from that of mining alone, and it is to the working of the many rich quartz ledges of Montana that Montana owes its present great degree of prosperity.

ANACONDA, MONTANA.

The history of the discovery of the gold and silver mines of Montana is almost coeval with the working of the placer deposits of the territory. The Dakota Lode, bearing gold quartz, was discovered at Bannock, and located on November 12, 1862. A mill to crush the quartz from the lode was erected in the following Spring. This was the first quartz mill set up in the territory. It was a rattle-trap affair, containing wooden stamps on which pieces of wagon tire were used for shoes. The first silver mill in the territory was the old Pioneer, now owned by the Hope Company, at Phillipsburg. It was built in 1865 by Ex-Governor Samuel T. Hauser and Dr. George C. Swallow. The pans for this mill were shipped by wagon all the way from San Francisco.

The building of the Utah Northern and Northern Pacific railroads gave a great impetus to quartz mining in Montana. Prior to that time there were no facilities in the territory for reducing ores. The advent of the iron horse wrought a great change in the old methods in use by the different mining companies who were operating here. Soon after the cars reached Montana great smelters were built on its prominent mining properties, and Montana commenced to forge to the front as the greatest mining district of the United States. In 1883 the total output of the gold and silver mines of Montana amounted to only $7,800,000. Five years later this output was increased to $23,759,000. Of this, $14,735,000 was in copper and lead. Before 1883 but small quantities of these latter metals were produced in the territory. Montana is today the greatest mineral-producing state of the United States.

The copper industries of Butte were first developed in 1875. Since that time the mines here have become the greatest copper producers in America. The great Anaconda mines, at Butte, are now noted as the mammoth copper mines of the world. They consist of six well developed mines. The original mine was bought in 1880 by the California millionaire, J. B. Haggin, for $30,000. The Anaconda was run as a private concern until 1891, when it was made a stock company, with a capital of $25,000,000. The ore from the mines here is shipped by rail to the neighboring city of Anaconda, where the company owning the mines operates the largest reduction works in the world. Montana's copper product is larger than that of any state in the Union. A few years ago the mines on Lake Superior, in Michigan, were regarded as the greatest copper producers in the world. Now a single Montana mine, the Anaconda, produces nearly two-thirds as much copper as is yielded by all the mines of Michigan. The production of copper in Montana, from 1882 to 1892, was as follows: 1882, 9,058,284 pounds; 1883, 24,664,346 pounds; 1884, 43,093,554 pounds; 1885, 67,797,864 pounds; 1886, 57,611,621 pounds; 1887, 78,699,677 pounds; 1888, 97,897,958 pounds; 1889, 105,130,000 pounds; 1890, 112,925,000 pounds; 1891,

112,763,420 pounds; 1892, 159,212,203 pounds. This makes a total production for the 11 years of 868,853,427 pounds. Of the Montana copper product for 1892, the mines at Butte produced 158,413,284 pounds, which, with the remaining 789,919 pounds produced in the state that year, had a market value of $19,105,464.

In 1892 Montana produced 143,508 ounces of gold, worth $2,966,572, and 17,405,093 ounces of silver, of a coining value of $22,503,554. The total value of the product of all mines in Montana in 1892, was $45,565,626. There was an increase during that year over the output of the previous year of 3,637 ounces of gold and 1,056,026 ounces of silver. The yield of the precious metals in Montana, from 1862 to 1892, according to the best obtainable data, was as follows: 1862 to 1867, gold $74,000,000, 1868, gold $15,000,000; 1869, gold $9,000,000; 1870, gold $9,100,000; 1871, gold $8,050,000; 1872, gold $6,068,000; 1873, gold $5,187,047; 1874, gold $3,844,722; 1875, gold $3,573,600; 1876, gold $3,078,013, silver $1,132,976; 1877, gold $3,200,600, silver $750,000; 1878, gold $2,260,511; silver $1,669,635; 1879, gold $2,500,000, silver $2,225,030; 1880, gold $2,400,000, silver $2,500,000; 1881, gold $3,000,000, silver $3,500,000; 1882, gold $2,550,000, silver $4,370,000; 1883, gold $1,800,000, silver $6,000,000; 1884, gold $2,170,000, silver $7,000,000; 1885, gold $3,409,400, silver $9,171,983; 1886, gold $4,425,000, silver $12,400,000; 1887, gold $5,978,536, silver $17,817,300; 1888, gold $4,200,253, silver $20,405,300; 1889, gold $3,794,009, silver $20,038,871; 1890, gold $3,022,577, silver $20,337,317; 1891, gold $2,891,386, silver $21,138,186; 1892, gold $2,966,571, silver $22,503,554. This makes a total output from the mines of Montana, between the years 1862 and 1892 inclusive, of gold $187,469,964, silver $172,971,376, a grand total of $360,441,340.

MONTANA BUILDING, WORLD'S FAIR.

Nearly all the ores of Montana carry a small percentage of lead. The lead output of the state, in 1892, amounted to 25,715,197 pounds, of a market value of $990,035. While Montana stands pre-eminent as a producer of minerals, her record as a dividend-payer is becoming equally as noteworthy. In 1892 the mines of the state paid one-fourth of the dividends paid by all the mining companies of the United States. The following is a statement of the dividends paid by Montana mines up to the 1st of December, 1892, except such mines as the Anaconda and others that are controlled by close corporations, and which never make their profits known: the Alice, Butte, $975,000; the Amy and Silversmith, Butte, $247,530; Boston and Montana, Butte, $2,075,000; Boston and Montana, Gloster, $520,000; the Elkhorn, Jefferson county, $571,000; the Empire, Lewis & Clark, $70,000; the Granite Mountain, Granite, $11,880,000; Bi-Metallic, $1,800,000; the Cumberland, $15,000: the Hecla, Consolidated, Beaverhead county, $1,500,000; the Hope, Phillipsburg, $233,532; the Iron Mountain, $110,000; the Glengarry, $10,000; the Lexington, Butte, $609,000; the Drum Lummon, Marysville, $2,489,675; the Moulton, Butte, $380,000; the Parrot, Butte, $1,800,000; the Pandora, $6,000. Total, $25,291,737.

Following is the detailed statement of the production of gold and silver in Montana, by counties, for the year 1892: Beaverhead, gold, $78,829.97, silver, $836,473.34; Cascade, gold, $560.37, silver, $1.54; Choteau, gold, $1,205.81, silver, $307.67; Deer Lodge, gold, $367,819.62, silver, $6,795,409.12; Fergus, gold, $1,339.76, silver, $601.77; Gallatin, gold, $2,453.79, silver, $39.10; Jefferson, gold, $186,391.61, silver, $2,177,762.97; Lewis and Clarke, gold, $667,254.93, silver, $109,439.88; Meagher, gold, $41,-

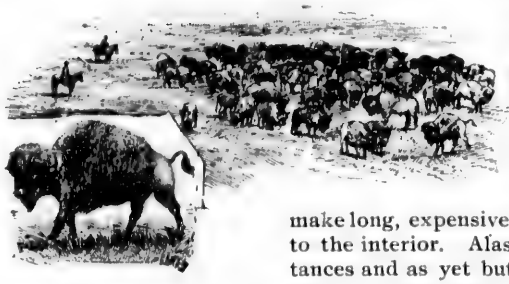
215.57, silver, $386,287.18; Madison, gold, $128,374.43, silver, $2,407.58; Missoula, gold, $37,827.22, silver, $610,029.75; Park, gold, $51,008.14, silver, $526.61; Silver Bow, gold, 748,786.77, silver, $10,745,704.49. Montana products reported by smelters, refiners and mints and assay offices not otherwise included, gold, $653,503.11; silver, $838,563.75; or a total product of the state of $2,966,571.90 in gold, and $22,503,554.75 in silver.

One of the surprises in Montana mining circles was the formation, in 1891, of the Sapphire and Ruby Company, limited. This company was backed by English capital for the exploration of the sapphire mines, on El Dorado bar, only a few miles distant from Helena. The sapphire was sometimes found in the early placer diggings of Montana. Little attention was paid to it, however, by the miners who were searching for gold. It was not until recent years that the value of these gems found here became known. Montana sapphires are of the largest size and the purest water, and of the most brilliant colors. The varieties most common here are the oriental emerald, the oriental topaz, the oriental amethyst and the oriental ruby. No gem, except the diamond, excels them in hardness and brilliancy. Other gems and metals found in Montana, in greater or less abundance, are garnets, emeralds, tourmalines, mica, asbestos, amianthus, telluride of gold, tin, bismuth, antimony, nickel, zinc, and vast quantities of the best varieties of iron ore. Another great mineral resource of the state lies in the extensive coal fields in the eastern part of the state. These coal measures underlie 70,000 square miles along the Missouri and Yellowstone rivers. The coal runs in grade from an inferior quality of lignite to a fair grade of bituminous. Some of this coal produces a superior quality of coke. The largest coal mine in the state is located eight miles from Livingstone, and is owned by the Helena Smelting and Refining Company. The output of the coal mines now being worked in the state is largely used by the railroads and by the Butte smelters and reduction works.

MONTANA SILVER STATUE. WORLD'S FAIR.

MINING IN ALASKA.—Alaska, the latest territorial acquisition of the United States, is seemingly out of the world. Yet in this far distant region to the north are mighty rivers alive with fish, vast forests of the same fine quality of timber found in Washington and Oregon to the south, and the great seal rookeries off the coast that have already yielded millions of dollars in wealth. In this land of great glaciers and sublime scenery, a few thousand men produce millions of wealth annually, which is added to the riches of the United States. The fisheries and sealing industry of Alaska are very important and the output of these industries is annualy increasing.

Next to its seals and its fisheries, the greatest source of revenue to the territory of Alaska is from the working of its mines. On the Yukon river for more than 1,000 miles from its mouth, are placers that in richness and extent recall to the memory of the miner the early scenes of Alder gulch, Montana, in its palmy days. Owing to the short season of three months in Alaska, however, the mineral output of the territory is not as large as it would be were the same mines found in warmer climates to the south. It must be remembered that while the part of Alaska bordering on the coast enjoys a climate as balmy as that of Portland, the interior of the ter-



HERD BUFFALO, FLATHEAD VALLEY, MONTANA

ritory is subject to the cold of the arctic circle in which a great part of Alaska is situated. It is in this cold belt that most of the placer gold is found and it is the intense cold of this region alone which prevents the rich placers here from yielding largely. In order to reach these diggings it is necessary to make long, expensive and sometimes dangerous journeys to the interior. Alaska is a country of magnificent distances and as yet but an exceedingly small part of its area has been explored. That the country is exceedingly rich in precious metals, is the opinion of every mining man and mineralogist who has ever visited it.

In 1892 Alaska yielded $1,090,476.55 in precious metals. With the exception of the small amount of $10,030, all of this was gold. Of the total mineral production of the territory in 1892 the great Treadwell mine produced $676,226.53. This mine contains enormous deposits of low-grade free-milling ore, most of which hardly averages $7 a ton. This, however, is one of the greatest mines of the United States today. It is located on Douglas island and is worked throughout the year. It is estimated that in the year 1892 the placer mines of the Yukon river, in Alaska, produced $111,000 in gold. This was an increase of about $10,000 over the product of the same placers for the preceding year. Mining in Alaska has a bright future and the gold output of the territory will doubtless show a large increase with each succeeding year.

THE COAL FIELDS OF WASHINGTON.—The state of Washington is one great storehouse, in which is locked up a source of wealth in latent industries that is but illy appreciated by the average visitor to the West. Washington has thousands of acres of the finest agricultural lands not yet touched by the plow. The state has vast deposits of gold, silver, copper, iron and other metals. The forests of Washington contain the largest and best class of timber in the world. The rivers of the state and the fishing banks of Puget Sound and the Pacific ocean to the West teem with countless varieties of the finest of food fishes, and the climate of this part of the coast is of an equable nature that will especially commend it to those who have braved the rigor of a Winter in Dakota or Minnesota. In the extent and diversity of its resources, the state of Washington is one of the most favored states of the Union, and the development of these resources will, within the next ten years, make Washington a populous and rich commonwealth.

At the present time the leading industry of Washington is the sawing of lumber. Next in importance to the lumber industry, is the mining of coal. Washington possesses the largest coal fields in the United States. While the estimate of the extent of these deposits cannot be definitely stated at the present time, owing to the fact that there has never been a geological survey made of the state, the estimate that there are no less than 1,000,000 acres of coal land in Washington is perhaps conservative. Coal is known to exist in 18 of the 34 counties of the state. Twenty coal mines are now being extensively worked in this field, and in addition considerable prospecting for coal is constantly being done, and isolated mines are being

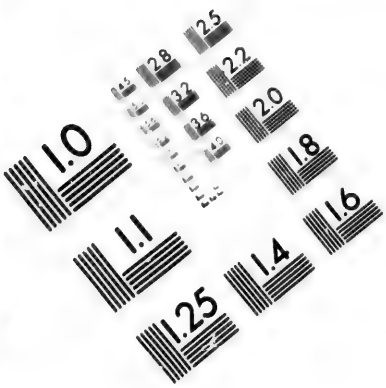
worked in a small way. The 20 mines referred to above, yielded 482,000 tons of coal in 1892, and this output, although brought into direct competition with English and Australian coals, brought to this coast principally as ballast in sailing vessels, found a ready sale in all parts of the coast.

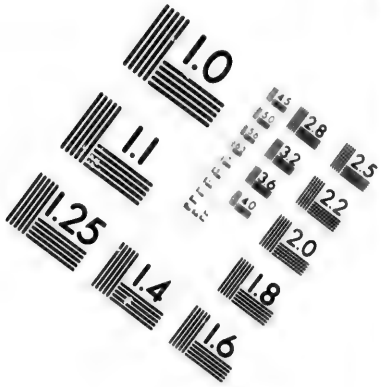
A COAL MINE AND DUMP, NEAR TACOMA

The coal of Washington ranges in character from lignite to anthracite. The most accessible veins are of the bituminous and lignite quality, and for this reason the large deposits of anthracite known to exist in the state have not yet been worked to any extent. The quality of the anthracite which has been uncovered so far in the state, however, is known to be good, and these deposits in time will prove no less valuable than those of Pennsylvania. Washington now supplies a large proportion of the coal burned on the coast. The Wellington coal of Vancouver Island, B. C., comes into direct competition with Washington coal in the San Francisco and other coast markets, but, as the Washington coal can be sold considerably below what the coal from the province can be landed this side of the border for, the foreign product is at a disadvantage in this field. The increased demand for coal on the coast is leading to the opening of more remote coal properties in the state, and it is only a question of a few years when all the valuable mines of coal in Washington will be worked.

With the exception of the Roslyn mines, located in Kittitas county, on the line of the Northern Pacific, the present productive coal mines of Washington lie west of the Cascade Mountains. The known lignite measures of the state extend from the British boundary, on the north, to the Columbia, on the south, and from the shores of Puget Sound, on the east for an average distance inland of about 15 miles. The bituminous measures adjoin the lignite belt on the east and extend eastward to the base of the Cascade range, while the anthracite deposits occur in separated areas, principally in the vicinity of the Natchez, Cowlitz and Snoqualmie Passes, in the Cascade Mountains. The coal fields of Western Washington are properly divided into four districts. These are the districts of the Skagit-Whatcom, King county, Pierce county and Lewis County.

The Skagit-Whatcom field is located in the northern part of the state and extends from the British boundary south to Bellingham Bay, and from this point south to the Skagit river. Its area is about 360 square miles. This field contains four workable veins of high grade bituminous coal, and three veins of lignite. The coal measures in this field are underlaid with clay schists and metamorphic slates, and, as these are an upheaval, the coal shows a very disturbed condition. The coal in these veins does not run regularly, but is "pockety," i. e., the veins irregularly pinch to almost nothing or thicken out to abnormal widths. The veins of coal nearest the schists are richest in carbon and lowest in moisture, the higher levels gradually losing carbon as they recede from the schists, until, in a few instances, a fine





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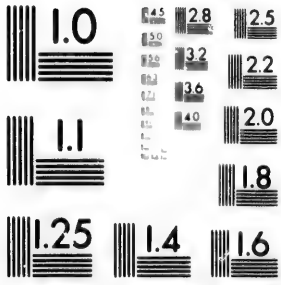

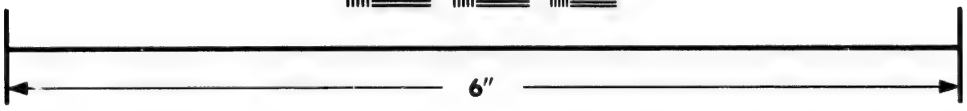

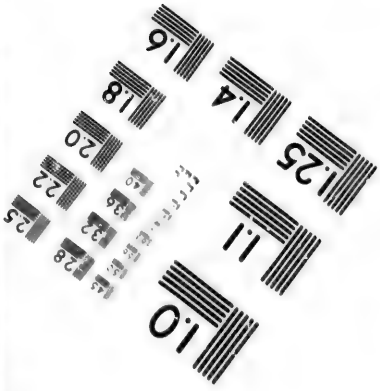

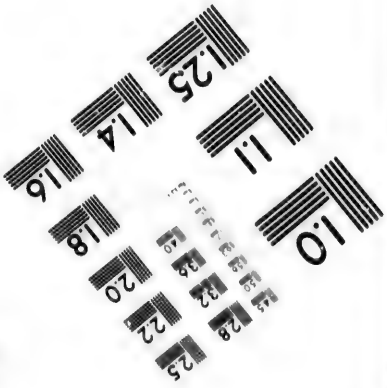

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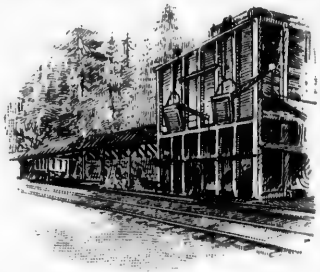
grade of locomotive coal is found, while on the Skagit the coal yields a coke equal to any made from the best Pennsylvania coal.

The dips of the veins in this district are very changeable, ranging from 30 degrees to vertical, and depend upon which slope of the great antichinal and synchinal folds the veins are exposed. Near Hamilton, on the Skagit, the coal found is very rich in carbon. At this place there are three or four distinct veins, dipping at an angle of 45 degrees. In this same vicinity large veins of iron ore are exposed to view by the Skagit river having cut through these deposits. At Jennings, a short distance from Hamilton, are three coal veins which are being developed, and coke ovens have already been constructed at this point. This coal makes an excellent quality of coke and will be found very convenient for smelting purposes. Experts who have examined the coal measures at Jennings, are strongly of the opinion that oil exists in the vicinity, and a test will soon be made to prove the correctness of this theory.

To the northwest of Jennings is the coal mine at Blue Canyon, on the eastern shore of Lake Whatcom. This coal is decidedly "pockety" and varies in thickness from one foot to twenty feet. It is a high gradec-oal and especially adapted to gas-making purposes. About 135,000 tons have already been mined here, most of which has been shipped to San Francisco from New Whatcom. The latter city is located on Bellingham Bay near the point where the first coal was discovered in the state. This coal was mined nearly 40 years ago for the Hudson's Bay Company's steamers. Nearly every gulch on either side of Lake Whatcom has its coal prospect, while along the coast line of Chuckanut Bay the coal measures crop out for miles, showing an enormous thickness, but considerable development work has only proved their worthlessness. The country north from Lake Whatcom is flat and consequently no exposures are seen, but the conclusion has been reached that no coal exists in this flat area, for the Canadian Pacific Railroad Company has bored to great depths across the line without finding any coal of value. The productive part of this field is nearly all on the eastern ridge, or nearest the mountains. The western portion is almost barren, with the exception of a few lignite veins found with a drill. During 1892 the yield from the coal field was as follows: Jennings, 4,740 tons; Blue Canyon, 25,675 tons; making a total production of 30,415 tons for the year.



COKE OVEN, NEAR TACOMA.

The analysis of the coals found in this field show the following results: JENNINGS: Coal—fixed carbon, 60.95; volatile comp., 28.75; moisture [water], .35; ash, 9.95; sulphur, .45; color of ash, whitish gray; coke, 70.90. The coal found in the Jennings mine shows the following analysis: Fixed carbon, 86.76; moisture [water], .44; ash, 11.12; sulphur, .841. The Blue Canyon Coal—fixed carbon, 59.90; volatile comp., 37.70; moisture (water), 1.30; ash, 2.10. The Hamilton coal—Sample No. 1—fixed carbon, 77.41; volatile comp., 7.46; moisture (water), .25; ash, 14.88; sulphur, .22; evaporating down to one pound coal, 9.50. Sample No. 2—fixed carbon, 80.20; volatile comp., 8.44; moisture (water), .30; ash, 11.06; sulphur, .21; evaporating down to one pound coal, 9.75. Sample No. 3—fixed carbon, 81.37; volatile comp., 11.10; moisture (water), .42; ash, 7.11; sulphur, .86; evaporating down to one pound coal, 10.00. Sample No. 4—fixed carbon, 71.66; volatile comp., 18.80; moisture

(water), 1.19; ash, 8.35. Hamilton Coke—Sample No. 1—anhydrous coke, 92.30; ash, 16.20; specific gravity, 1.426. Sample No. 2—anhydrous coke, 91.26; ash, 12.12; specific gravity, 1.389. Sample No. 3—anhydrous coke, 88.48; ash, 8.04; specific gravity, 1.346.

The King county field is the largest and best developed coal field in Washington. It is divided into two classes of coal, one a very high-grade of lignite, which is found in an area covering about 120 square miles. The other is a semi-bituminous coal found in an area covering about 300 square miles. This coal belongs to the cretaceous period. Nearly all of King county is covered with glacial drift carried down by glaciers from the Cascade Mountains during the glacial epoch of the quartenary period. In some instances the ground is covered by this drift to a depth of 300 feet. Thus, were it not for the river beds of ancient water-courses, bedrock would seldom be exposed here. The lignite of this field possesses great heating qualities, and is used for both domestic and steam purposes. This coal kindles easily and makes a hot fire, and is almost as clean to handle as wood. The general dip of the lignite veins seems to be to the north, while in the bituminous district there is no regularity whatever and, as the veins of the latter deposits approach the mountains, the strata become very distorted, but the coal becomes much richer.

HAULING COAL FROM MINES, GILMAN, WASH

An interesting illustration of the peculiarities of contracted strata is found in the Green River canyon. At one point here the vein emerges from the river, rises into the exposed side of the river bank, turns over and then disappears again under the river in an opposite direction, all in a distance of a little over 100 feet. The crushing the coal was subjected to here can be distinctly seen in the open fissures at the top of the vein and the squeezed, contracted conditions at the bottom.

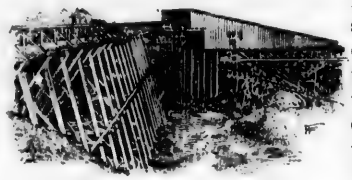
At Gilman there are four veins of coal, varying in thickness from four to nine feet, between walls dipping at an angle of 35°. This is the well-known property of the Seattle Coal & Iron Company, one of the largest mining corporations in Washington. The coal at Gilman is a very high-grade lignite, and is adapted to both domestic use and steam purposes. It is used by all the railroads entering Seattle, and has a large retail sale in all the cities of the Pacific coast. The output of this mine reached the large total of 103,000 tons in 1892, and the extensive development now being done here will increase the output during the current year to nearly 1,500 tons a day. The general offices of the company are located at Seattle. A wholesale yard and office are maintained in San Francisco, and a yard is also operated by the company at Guajamas, Mexico. The bunkers at Gilman have a capacity of 2,200 tons, and the retail bunkers at Seattle hold 1,000 tons. Coasting vessels are loaded with this coal at Smith's Cove, just above Seattle. The coal mined at Gilman is unexcelled for burning in locomotives. It burns freely, is comparatively free from sulphur, does not injure the tubes of the boiler, and makes steam rapidly. Engines using this coal have never suffered from leaky flues.

The Newcastle mine is situated four miles west of Gilman. It has been worked for over 25 years past, and is today one of the greatest producing coal mines in the state. In the Newcastle are five distinct veins, three of which are workable. These veins vary in thickness from 5 to 20 feet. The floor and roof are of sandrock, and

in places acres of coal have been mined without the use of supports of any kind. The slope, which is now down 2,000 feet, is the longest in Western Washington.

The Cedar Mountain, another lignite mine, is eight miles southeast of Newcastle. This vein maintains an average width of about 12 feet. At Renton are four veins of coal varying in thickness from 3 to 15 feet. A fair vein of lignite is also found at Black River Junction. The Black Diamond mine is situated southeast of Cedar Mountain. This property contains five veins of semi-bituminous coal, three of which can be worked. These vary in thickness from three to eight feet, and furnish an excellent steam coal, which is in great demand in San Francisco. The Franklin mines are three miles further east, and really belong to the same field as the Black Diamond. They contain four veins, with a dip varying from 17 to 55 degrees. Beyond the Franklin, and further to the east, are the coal mines of Cokedale, Kangley, Alta and Durham. In the vicinity of the last named mines a number of veins have been discovered, and some of these veins will doubtless prove paying properties. At the present time, however, it is impossible to form any reliable estimate of their producing qualities.

PHOTO. BY MITCHELL & SMITH, PUYALLUP.



COAL MINING, GILMAN, WASH

Scattered all over the field, from Palmer to Grand Ridge, are dozens of holes and tunnels, on some of which considerable work has already been done. The properties at Sherwood's, Raging creek and Niblock's are especially developed. At the latter place there are some seven or eight veins of coal which make an excellent coke.

The output of the King county coal mines, during 1892, was as follows: Gilman, 103,000 tons; Newcastle, 160,000 tons; Cedar Mountain, 13,000 tons; Black Diamond, 90,000 tons; Franklin, 75,000 tons; Alta, 14,000 tons; Kangley, 25,000 tons; Denny, 4,000 tons, making a total of 484,000 tons for the year.

The following is the analysis of coals found in King county: Gilman, fixed carbon, 53.49; volatile comp., 32.64; moisture, 2.05; ash, 11.40: sulphur, .42. Newcastle, fixed carbon, 43.90; volatile, 46.57; moisture, 2.12; ash, 7.28; sulphur, .13. Franklin, fixed carbon, 50.78; volatile, 34.63; moisture, 3.66; ash, 10.93; coke, 61.71. Black Diamond, fixed carbon, 45.11; volatile, 47.19; moisture, 3.11; ash, 4.56; sulphur, .01. Cedar Mountain, fixed carbon, 37.20; volatile, 41.40; moisture, 13.00; ash, 8.40. Kangley, fixed carbon, 52.00; volatile, 45.50; moisture, 1.00; ash, 1.50. Niblock (washed), fixed carbon, 79.66; volatile, 14.99; moisture, 3.92; ash, 1.10; sulphur, .33.

The Pierce county field is small in area, but rich in the number and thickness of its veins of coal. The coal found in this field is all of an excellent quality, and is in great demand in San Fancisco and the cities of Puget Sound. A large quantity of this coal is also made into coke. At Wilkeson there are 50 coke ovens in full blast, and this coke is shipped from this point in large quantities. The Pierce county coal field commences at South Prairie and extends in a line due south to the Nisqually river, a distance of 26 miles. The measures are of great width, being from 20,000 to 25,000 feet thick, and standing, usually, from 70 degrees to perpendicular. The area of this field is about 100 square miles. It is very difficult of access, and this is a

serious drawback to operating the mines found here. The rugged canyons of the Mashel, Puyallup and Carbon rivers, with their deep, turbulent waters, present obstacles to successful working of many of these mines that will require the highest skill and ingenuity to overcome.

Commencing at the southern end of the county, the coal is exposed at a point overlooking the valley of the Nisqually river. At this place is a favorable location for a coal mine, but from this point north to Wilkeson the country is yet an unbroken wilderness. The coal veins crop out from the flanks of the steep mountain side dipping, usually, to the east at heavy angles. At other times they can be traced up the beds of the mountain streams, cropping out, one after another, in bewildering numbers. In places where igneous masses of rock are adjacent, the coal approaches an anthracite in appearance and quality, and is always a first class bituminous coal, which makes excellent coke. This vast deposit of coal will, in time, be of great commercial value to the Pacific coast, especially when the manufacture of pig-iron and the smelting of silver shall have attained the importance here which these industries promise to assume.

At the northern end of this field several branches of the Northern Pacific railroad have been built to the mines of Carbonado, Wilkeson, South Prairie, Pittsburg and Acme. Carbonado mine is opened in the canyon of the Carbon river, a swift mountain torrent, which furnishes sufficient power to operate all the machinery of the mine. This is the largest producing mine in the county, and its entire output is used by the Southern Pacific Railroad Company.

At Wilkeson there are two mines opened on the opposite side of the antichinal fold. In driving the gangway of one of these mines the bed of an ancient glacier was passed through. This was 700 feet in width and showed a depth of over 300 feet of glacial drift. The banks of the glacial stream can be traced to the surface. The Wilkeson coal is used as a standard by the United States government in making comparisons of the qualities of different coal on the coast. South Prairie, four miles beyond Wilkeson, contains but one vein of coal that can be worked. This vein is not over three feet in thickness, but the coal taken from it is of great value for its gas-making properties, it yielding five cubic feet of gas to the pound. At Pittsburg, east of South Prairie, and on the same creek, the veins are very dirty and, from present appearances, of little commercial value. Still further up the creek is Acme, where the veins are similar to those at Pittsburg. From the latter point north no croppings are exposed until the measures reappear at Franklin, in King county. The output of the Pierce county coal mines in 1892 was as follows:

PHOTO. BY MITCHELL & SMITH, PUYALLUP.

800 FEET UNDER-GROUND, GILMAN MINE, WASH.

Carbonado, 132,000 tons; Wilkeson, 91,000 tons; South Prairie, 40,000 tons; Acme, 3,000 tons, making a total product of the year of 316,000 tons.

Recent analysis of the coals of this county show the following results:

Carbonado — fixed carbon, 58.30; volatile, 30.70; moisture, 1.74; ash, 9.26. Wilkeson — fixed carbon, 62.87; volatile, 25.56; moisture, 1.87; ash, 9.70. South Prairie — fixed carbon, 59.89; volatile, 34.49; moisture, 2.59; ash, 3.03. Nisqually — (anthracite) fixed carbon, 71.25; volatile, 18.55; moisture, 1.72; ash, 8.48; sulphur,

.71. Nisqually—(bituminous, unwashed) fixed carbon, 59.52; volatile, 26.41, moisture, 1.35; ash, 18.72; sulphur, .67.

The Lewis county field contains three grades of coal. The area of the respective fields of these different grades of coal are as follows: Anthracite, 72 square miles; bituminous, 216 square miles; lignite, 180 square miles. In the western part of the county the lignite veins appear, dipping at various angles, and are of various thicknesses. Although this is considered the lowest grade of lignite in the state, yet it makes a good fire and burns freely. The rich bituminous field of this county is as yet undeveloped, owing to the lack of transportation. Experts are of the opinion, however, that this is a continuation of the Wilkeson and Carbonado fields and the coal of the two fields is believed to be equal in quality. The veins in the bituminous field vary in thickness from 3 to 15 feet between walls, and are more or less mixed with foreign matter. This part of the state will undoubtedly become a great coal center as soon as the product of the mines here can be economically hauled to market.

The anthracite field is located in the eastern part of the county, but it has not been opened up to the present time for the same causes which have prevented development work in the bituminous field. The anthracite veins are very much mixed and, at this time, it is extremely difficult to form a satisfactory estimate of their utility. Every indication, however, is encouraging, and the anthracite field will doubtless in time prove very valuable.

MANUFACTURING DISTRICT, SPOKANE

In Cowlitz county, south of Lewis county, two mines are now being worked. One of these is at Kelso and the other at Castle Rock. Both of these coal properties are yielding a good quality of lignite. Mines are also being worked at Bucoda and Centralia, on the line of the Northern Pacific, where a good quality of lignite is being mined.

The following is the output of this field for 1892:

Bucoda, Lewis county, 10,000 tons; Centralia, 7,800 tons; Castle Rock, Cowlitz county, 750 tons; Kelso, Cowlitz county, 2,000 tons, making a total of 20,300 tons for the year.

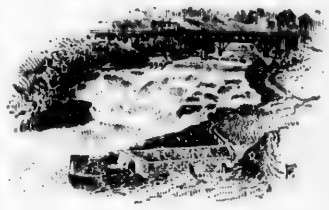
The only available analysis of coal in this field is as follows: Bucoda—(lignite) fixed carbon, 49.75; volatile, 35.40; moisture, 2.55; ash, 12.30. Centralia—(lignite) fixed carbon, 43.40; volatile, 39.50; moisture, 4.50; ash, 12.60. Bituminous field—fixed carbon, 60.30; volatile, 33.30; moisture, 1.70; ash, 4.70.

The mines of Roslyn, on the east side of the Cascade range of mountains, will receive suitable mention in another article.

LIME INDUSTRY OF WASHINGTON.—An industry of great magnitude in Washington to-day, and one on which the public has but little accurate information, is the manufacture of lime. The production in this state of this most essential of building materials, on a large scale, is an important factor in the question of economy and facility with which the cities and towns of the Pacific Northwest are being improved.

The only extensive ledges of limestone known to exist in the Pacific Northwest, and by far the most valuable on the Pacific coast, are located on the San Juan Islands, lying between the Straits of Fuca and the Gulf of Georgia, off the northwest coast of Washington. Deposits of lime rock are found in Southern Oregon and in a few other parts of the latter state, but these deposits have never been heavily worked and their extent and importance have not been proved of sufficient value to allow them to compete with the vast deposits on San Juan Islands. The lime rock found on this group of islands is the best in the United States. It contains 50 per cent. of lime, or 98½ per cent. of limestone. The largest and purest of these ledges is the one at Roche Harbor, on the extreme northwestern portion of San Juan Island. This ledge is a solid mass of marble, extending across the neck of a peninsula formed by Roche Harbor and Westcott Bay, a distance of half a mile. This ledge has an average width of 850 feet, and reaches to a height above the water of 350 feet, the average elevation of the ledge being fully 250 feet. How far it extends under the water is not known.

There is sufficient limestone above the water here to make a monumental shaft for every man, woman and child in the United States. Here is a deposit of half a billion cubic feet of the purest gray marble [70,000,000,000 pounds], an amount sufficient to make 350,000,000 barrels of lime. At the rate of consumption of a thousand barrels a day this is enough to last for 1,000 years.



WATER POWER, SPOKANE.

About 30 years ago the United States government inquired into the resources of San Juan Islands. They found here extensive ledges of limestone. Soon after the settlement of the international boundary dispute, which ended with the United States gaining possession of the islands, a man named Ruff homesteaded the ledge of limestone at Roche Harbor, but no work was done in the development of this ledge until 1882, when the manufacture of lime from this rock was commenced in a stone draw kiln by parties operating under the name of the Roche Harbor Lime Company. About the same time other parties began to manufacture lime on a small scale on the island, and San Juan lime soon acquired a great reputation in the markets of the Northwest. In quality the stone found on these islands is superior to any other limestone yet found in the United States. Numerous assays of it have been made by various persons and for different purposes, the samples having been taken from many different portions of the ledge. The results of these tests have all shown as high as 98 per cent. limestone, and most of the tests even more than this. When it is stated that the rock from which the famous "Marble Head" lime, of Ohio, is made contains only 82 per cent. of carbonate of lime, the value of the great lime deposits of San Juan Islands is at once apparent. The tests of the lime rock found here give the following analysis: silica, .44; iron and alumina, 1.13; phosphorus, .11; carbonate of lime, 98.21.

This stone contains no sulphur, and for flux is unsurpassed, as it acts as a pure limestone and requires the addition of nothing to counteract deleterious ingredients, as is often the case in fluxes used in smelting. The Roche Harbor ledge is very important to the smelting interests of the Pacific Northwest, and these ledges will no

doubt supply the greater portion of stone used in the future great smelters of iron, gold, silver and copper ore which will be located here in the near future. This stone for fluxing purposes, is now being shipped from the San Juan Islands to the smelters at Irondale, Washington, Oswego, Oregon, and to other parts of the Northwest.

PHOTO BY BAILEY.

SPOKANE RIVER CANYON.

In addition to the great works on the San Juan Islands, lime is also manufactured to a small extent in the Big Bend, Palouse and Colville sections of Eastern Washington. The output of the kilns in these latter localities, however, is used almost wholly to supply the local demand, and it is not a staple article of export as is the product of the Roche Harbor kilns. In this connection a brief description of what lime is and how it is made at the great kilns at Roche Harbor will prove interesting reading.

Lime is the oxide of calcium, which, in combination with carbonic acid, forms carbonate of lime, the chief constituent of limestone, as it is seen in nature in the form of rock, marble and shells of marine animals. Lime is made by freeing the stone from its carbonic acid. This is accomplished by means of heat, by which process the acid is volatilized, leaving behind the white, brittle and flaky substance known to commerce as lime. Lime is calcined in a kiln so constructed that heat enters near the bottom and passes upwards through the stone, which has previously been broken into small pieces. The top of the kiln is left open for the free escape of the smoke, gasses of combustion, and for the purpose of forming a strong draft. The degree of heat required to properly calcine the rock is not specific, but the greater the heat used the quicker the process of driving out the acid from the rock is accomplished.

The primitive form of kiln in use, the one adopted generally by lime manufacturers operating on a small scale, is known as the pot kiln. The stone kiln is a decided improvement on this old form, however. In the stone kiln there is a radical change of principle from the primitive affair, as it is so constructed that the fire is never drawn, except to make necessary repairs. The lime is drawn off from the bottom as fast as it is calcined, an equal quantity of rock being fed into it from the top at the same time. In these improved kilns are usually four furnaces, two on the sides of the kiln opposite to each other and entering it about four feet from the bottom. In drawing the lime, all of that material occupying the space between the fire and the bottom is taken out through an opening in the bottom of the kiln. The kiln itself consists of a wall of masonry about 20 feet high and 18 feet square, supported outside by heavy cross timbers and having a cylindrical space of a diameter of five feet in the center. Above this is a wooden crib, the full size of the kiln, in which the stone is dumped, making the kiln itself self-feeding as the lime below is drawn out.

The Monitor kiln now in use at Roche Harbor differs essentially from the stone kiln. It consists of two thicknesses of fire-brick and one of red brick, all inclosed in a jacket of boiler iron, a space of two inches between the brick wall and jacket being filled with bleached ashes or gravel. This filling serves as a non-conductor of heat and it also relieves the kiln from the effects of the great expansion while burning. One of these kilns holds about 30 tons of rock. It has two furnaces, one on each side. A boiler smokestack projects above the kiln, thus creating a better draft than is

afforded by the above kiln and insuring more perfect combustion. In the Monitor kilns a system of drafts has been adjusted to the cooler so that a current of fresh air is constantly passing around the lime, thus cooling it more rapidly than was formerly done in the old kilns, and facilitating the operation of barreling.

A barrel of lime weighs 200 pounds, and is filled and weighed directly under a chute running from the cooler in the kiln. The process of causing the lime to settle down after the kilns are drawn is one of the most interesting sights connected with lime making. This is seen to the best advantage after nightfall, when the outer darkness contrasts vividly with the brilliancy of the interior of the kiln when the furnace door is opened. When a drawing is made, and the heavy iron doors of the furnace are opened, one can look into the heart of the kiln, which is glowing with an intense white heat, and see the void left at the bottom by the lime being drawn off, and the superheated rock above, held suspended in its place by the expansion of the great bulk caused by the intense heat to which it is subjected. After allowing the lime to fall the fireman fills up the vacancy caused by working at the mass above with a long iron poker. The intense white of the glowing mass turns gradually to the palest green as it comes in contact with the air drawn in through the furnace opening. One of these new kilns will burn one and one-half cords of wood a day in its two furnaces, and it will produce 30 per cent more lime a day than will one of the old stone kilns burning the same amount of fuel, which in turn produced over 60 per cent more lime than the primitive pot kiln.

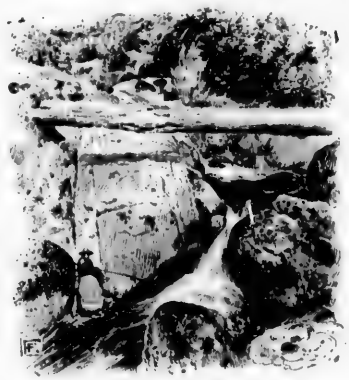
There is today over $1,000,000 invested in the limeworks at Roche Harbor, and one company at Tacoma and the Roche Harbor company each has a record of over 1,500 barrels of lime per day. This is the most extensive enterprise of the kind in the West. As there is no other great and available source of supply for lime, San Juan lime will always remain one of the great staple articles of trade on the coast.

The Fishing Industry of the Northwest.—The waters of the Pacific Northwest teem with countless varieties of food fishes. In the mountains of this part of the West are hundreds of sparkling brooks literally alive with the most beautiful of gamy fish, the different varieties of the speckled trout. Through the valleys flow great rivers. Each season millions of salmon ascend these rivers to the spawning grounds at the headwaters. The canning and salting of salmon is, today, one of the great industries of the West. In addition to salmon, the principal rivers of Oregon and Washington contain large numbers of sturgeon, shad and other varieties of food fishes, and the salt waters of the ocean along the coast are alive with halibut, cod, mackerel and the better varieties of salt water fish found along the Atlantic coast. In the numerous bays and inlets of the Pacific coast are found great beds of oysters and clams, and all varieties of shellfish found on the Atlantic coast with the possible exception of the lobster, are found in equal numbers along the shores of Oregon and Washington.

INDIAN SPEARING SALMON HEADWATERS COLUMBIA RIVER, B. C.

The Columbia river, one of the great streams of the continent, from its head waters in the Rocky Mountains to its mouth, contains more varieties of food fishes

than does any other stream in the United States. Along the shores of the Pacific ocean, clear up to the glacier-lined and ice-covered bays of Behring sea, is the best of deep-water fishing. In Puget Sound are inexhaustible quantities of salt water fish. At the extreme inland end of this great body of water, almost entirely surrounded by land, are extensive beds of oysters. Other oyster beds are found on Shoalwater Bay (Willapa Harbor), on the Washington coast, and at Yaquina Bay, in Oregon. Lying in the heart of the great mountain ranges, in the midst of romantic scenery, are four large lakes, the waters of which abound in gamy fish. These lakes are easily accessible from the lines of railroad. The names of these lakes are Chelan, Kootenay, Pend d'Oreille and Cœur d'Alene. In the valleys of the interior are noted angling resorts. The largest of these resorts is the Flathead Lake, in Montana. In Southern Oregon, lying in the shadow of mighty mountains, and surrounded by deposits of what was possibly the greatest volcanic upheaval the world has ever witnessed, are numerous large lakes. The casting of a fly into the waters of any of these numerous lakes will immediately bring to the surface myriads of fish eager for the bait which is seldom offered them. Within walking distance of any railway station in this entire region are unexcelled fishing grounds. The country anglers' paradise is the region of the Northwest. If the gentle sportsman and philosopher who many years ago wrote a book on angling, which subsequently became a classic, had visited this region, his literary work would doubtless have been the writing of marvelous fish stories. The enthusiastic disciple of Izaak Walton after fishing for the first time in the waters of the Northwest becomes dangerously enthusiastic over the sport of Northwestern fishing. As an instance of the marvelous stories told of fishing in the West the following will be found worthy of relating:

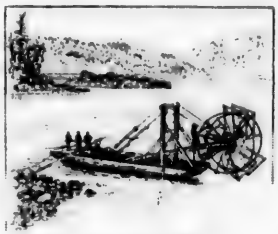


ROCK CREEK, NEAR NEWPORT, OR. A FAMOUS TROUT STREAM.

In West Kootenay, British Columbia, just north of the boundary line of Washington, the Kootenay river leaves the lake of the same name and cuts its way for 28 miles through the Selkirk Mountains to the Columbia river. At one point in its course the river, surging over a huge mass of rock, 30 feet high, forms St. Agnes falls. Immediately below the foam at the foot of the falls is a deep pool in which can be seen endless numbers of trout which would weigh all the way from three pounds to seven pounds each. A catch here of 100 pounds of fish in a day is not uncommon. The close proximity of snow-fed and crystal mountain streams to the centers of population of this section brings the exhilarating pastime of angling within reach of the most humble resident of the West. Fishing here is an inexpensive enjoyment, and the assurance is always given the angler before he casts a fly that he will come back loaded with fish. The game fish found in the lakes, rivers and seas of this region are the mountain trout, lake trout, salmon trout, perch, pike, grayling, rock cod and salmon.

The salmon found in the waters of the Northwest is divided into several varieties. One of these is known as the silverside. This fish weighs from 6 to 45 pounds each.

It is very gamy, and is caught on Puget Sound and tributary streams in October, with trolling lines. Unlike the salmon of the Atlantic coast and England, this fish in the Northwestern waters will not rise to a fly. Including the several species of trout so abundant in every stream here, there are no less than 16 different varieties of salmonidæ found in the waters of Oregon and Washington.



FISH WHEEL, COLUMBIA RIVER, UPPER CASCADES.

To the thoughtful economist the fish of commerce are of far more importance than are those sought for by the angler. The fishing interests of the Northwest are now of great magnitude. It is estimated that the total value of the fishing industry, consisting of vessels, apparatus and buildings, in the Northwest, is not less than $3,500,000. There are about 13,000 men employed in catching the fish here and in preparing them for market. The aggregate value of the fish output of the Northwest now approximates $8,000,000 annually.

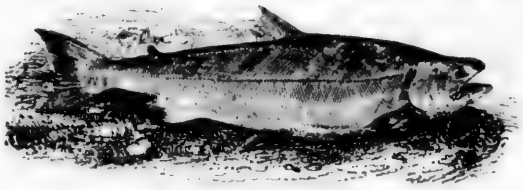
The salmon is the most important fish of commerce caught in Northwestern waters. The rivers, bays and sounds of this region contain millions of the many varieties of salmon. Immense numbers of these fish are taken in the Columbia river, in Puget Sound, in the Fraser river, British Columbia, and in the streams of Alaska, as well as from the numerous small rivers along the coast. Before the advent of the white man the Indians of the Northwest subsisted largely on salmon, both in its fresh state and dried for winter's use. The proverbial laziness of the "siwash," as the Indian is called, and his abhorrence for anything that resembles work, prevented him from hunting over the great mountain regions of the interior, and fishing was to him an exceedingly congenial method of procuring food. After 1829 over 1,000 trappers and voyageurs of the Hudson's Bay Company roamed through the Northwest. Until the invasion of the later American settlers in this region, salmon formed the principal food of the Hudson's Bay Company's men.

INDIAN FISHING FOR SALMON. COLUMBIA RIVER.

In 1865 experiments demonstrated that salmon canned and hermetically sealed retained its flavor, and could be thus kept in a perfect state for years. Soon afterwards canneries began to multiply along the banks of the Columbia river for preserving this fish. It was not long before canned salmon became a staple article of commerce in the United States and Europe. The Columbia river salmon industry increased from 4,000 cases in 1866, to the enormous pack of 629,000 cases in 1883. From the latter year until the present time the pack has gradually fallen off. This decrease has been caused by the reckless use of traps, and other fish-destroying appliances, which have prevented the fish from reaching their spawning grounds at the head of the numerous streams. The only way to keep up the supply is by artificial propogation. To this end a hatchery was established some years ago on the Clackamas river, near Portland. Those who have studied carefully into the subject believe that at least four additional hatcheries ought to be established on the tributaries of the Columbia river. The

turning out of 75,000,000 fry (young salmon) annually, it is said by experts, would insure a maximum pack by the Columbia river canneries of 500,000 cases a year. The percentage of young salmon that hatch out from eggs in a natural state is but 2 per cent, while under artificial propogation 95 per cent of the eggs are hatched.

The salmon of the Northwest is encorrhycus, and is not the salmo of Eastern waters. In all there are about 30 species or varieties of fish in the Columbia river that go by the name of salmon. Many of these, however, are sea trout. The principal species of salmon are known commercially as the chinook (the royal fish of the Columbia) the steelhead, the silverside and the blueback. The chinook is superior to all other varieties of salmon caught in the world. It weighs from 1 to 89 pounds, its average weight being from 20 to 30 pounds. The flesh of this fish is a rich red in color, the fat is equally distributed throughout the fish, and the oil is retained in the flesh after either cooking or canning. It has a delicious flavor. No resident of the Northwest who is fully acquainted with the merit of the chinook ever eats any other variety of salmon. The chinook commences running in April. The steelhead enters fresh water in October, and it is distinguished from the chinook by its slender body, pale flesh and tapering tail. For immediate use it is regarded but little inferior to the chinook. When cooked, however, the natural oil of the fish separates from the flesh, thus giving it an unappetizing appearance when canned. Next in size to the steelhead is the silverside. Its average weight is about 11 pounds. It is a fall fish and does not differ materially in appearance from the steelhead, except in the bright part of its body, from which it has derived its name. The blueback is a spring fish, much smaller than the other varieties of salmon. Its average weight is from three to seven pounds. There are other names given the salmon caught in the Northwest, but the varieties that are taken in large numbers here properly belong to the commercial classifications named above.



ROYAL CHINOOK SALMON, COLUMBIA RIVER.

The salmon enters fresh water only when fully grown and for the purpose of spawning. The young salmon descend the streams to the ocean in the spring freshets, and in about four years they reach their maturity. The fish then return to the river in which they were spawned, and in their turn deposit their eggs here. This wonderful instinct, that enables a fish to return to the waters of its birth after an absence of from three to six years, is the most remarkable of the many peculiar habits of the salmon. This fish eats nothing in fresh water. Thus it is useless to attempt to catch it with bait in any of the rivers here. The concensus of opinion is that few if any of the full-grown salmon that enter the rivers ever return to the ocean. This is borne out by the fact that they are never caught heading down stream. The salmon ascend the Columbia river for a distance of over 1,000 miles, to the headwaters of this stream in the Rocky Mountains of British Columbia. Here they are found cut and bruised, with broken fins and tails, the marks of their many desperate struggles with the rapids and currents of the stream below. The salmon that escape the nets of the fisherman, it

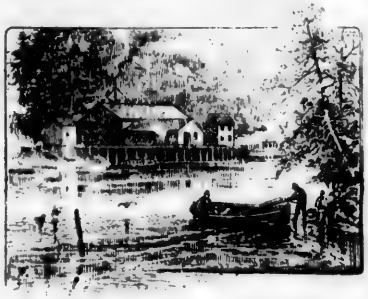
is believed, die soon after depositing their eggs. If they do not die, they must return to the ocean, for otherwise they would literally choke the headwaters of the streams they frequent, and would thus attract attention. They probably die where they spawn and are eaten by birds and beasts of prey or by numerous voracious varieties of small fish which are found in shallow waters.

FISH WHEEL AND TRAP FOR SALMON, COLUMBIA RIVER.

Oregon ships 1,500,000 pounds of fresh salmon, and Washington 500,000 pounds to points as far east as Boston. About one-half the canned salmon from the Northwest is carried in vessels to England and Europe, and the remainder finds its way into every hamlet and city of the Union. Astoria, Oregon, situated near the mouth of the Columbia river, is the greatest salmon-canning center in the world. A description of the fishing methods in vogue here will answer as an illustration of the handling of this industry on other parts of the coast.

In the season of 1893 about 2,178 men were directly engaged in the catching and canning of salmon at Astoria. Of these, 175 men worked on fish traps, 1,300 men fished with gill nets, and the balance were employed in the canneries preparing the fish for market. Six hundred and fifty boats left this port every day during the fishing season. Each boat carried a gill net and necessary gear. The average earnings of the boats were about $523 each for the season. The seven canneries at Astoria have an aggregate running capacity of 300,000 cases for the season, and the total wages paid by these canneries to the fishermen and help was $926,500 in 1893. The canneries here annually use $165,000 worth of tin. During the past season the Columbia river pack amounted to 424,000 cases, of which 260,000 cases were put up at Astoria. In connection with some of the leading canning centers, which are fully described in "The Handbook," will be found extended mention of the numerous details connected with the canning of salmon for market. Canneries are now scattered all along the coast from Yaquina Bay, on the south, to Alaska, on the north. Large canneries are established at Alsea, below Yaquina, Nestucca, Tillamook, Puget Sound, Fraser river, and all along the Alaska coast. These numerous canneries handle millions of fish annually, and their product forms one of the staples of Northwestern commerce.

PHOTO. BY A. GYLFE.

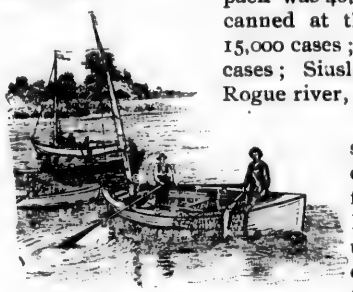


SALMON CANNERY ON THE WILLAPA, SOUTH GEND, WASH.

The salmon pack of the Pacific Northwest, for the season of 1893, was about 1,721,660 cases. This pack was valued at $7,513,507. The fall pack, included in the above total, was 198,660 cases, valued at $743,975. The Alaska pack, for the year, was 610,000 cases, valued at $2,460,332, and the British Columbia pack was 548,000 cases, valued at $2,411,200. Of the pack of British Columbia, 460,000 cases were packed on the Fraser river, and 88,000 cases on the Nass and Neuse rivers. The Washington pack, outside of that of the Columbia river, was valued at $456,500. This pack was made up as follows: Geo. T. Myers' cannery, Seattle, 35,000 cases; Fraser

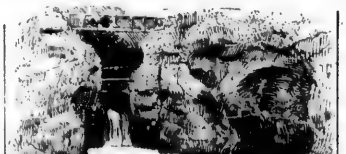
river, Blaine, 57,000 cases; Aberdeen, 35,000 cases; making a total of 122,000 cases. The Columbia river spring pack was 365,000 cases, valued at $1,898,000. The fall pack was 30,000 cases, valued at $112,500. The Oregon coast pack was 46,660 cases, valued at $174,975. This salmon was canned at the following places: Nehalem and Tillamook, 15,000 cases; Coquille river, 5,000 cases; Umpqua river, 5,000 cases; Siuslaw river, 10,000 cases; Coos Bay, 3,500 cases; Rogue river, 3,160 cases; and Alsea, 5,000 cases.

PHOTO. BY HEINS.



SALMON FISHING, TILLAMOOK BAY, OREGON.

Second in importance only to the canning of salmon on the Columbia river, is the catching and curing of sturgeon. Of all valuable varieties of food fish the sturgeon is the most repulsive looking. It has a long hog-like snout, small glassy eyes, an ugly protruding mouth, bony sides and a sharp fin extending down the whole length of its back. The Columbia river sturgeon is a transmonatanus or white sturgeon, and it is the largest of the sturgeon family. It is one of the oldest of the primitive varieties of the fish family now in existence. The average weight of the sturgeon dressed, caught in the Columbia river, is 125 pounds and its maximum weight is 1,000 pounds. One of these fish was caught near the mouth of the Columbia river, last October, that weighed 755 pounds. The head alone of the monster fish scaled 151 pounds. Like the salmon, the sturgeon is a salt water fish. It spawns in all the rivers entering Puget Sound, and in those entering the ocean to the south. It has no gamy qualities and is hauled up from the bottom of the river like a log. In the early part of the season sturgeon are caught in the gill nets along the Columbia river. After the gill net season is over the method of catching these fish is a peculiar one. Doubtless, sturgeon is the only fish caught with a hook and line without the use of bait. They are caught by lowering a line with a number of big hooks fastened to it to the bottom of the river by means of sinkers. The big, clumsy sturgeon, swimming sluggishly along the bottom of the stream, in search of food, suddenly feels one of the sharp barbed hooks fastening itself in his scaly side. In threshing about to clear itself the fish gets afoul of more hooks and is thus securely fastened.



TROUT FISHING, WILLAMETTE VALLEY.

The sturgeon, as an article of commerce, has attained a position of great importance in the Northwest. Its flesh is wholesome and palatable, and from its roe is made that epicurean relish called caviar. Nearly every part of this fish is utilized; the bladder is manufactured into isinglass, the spinal cord is removed and dried and it is one of the many queer articles of food highly prized by the Chinese. When boiled, it forms a sort of gelatinous substance which the Celestial eats with great relish. Large quantities of prepared sturgeon spinal cord are shipped to China from the Columbia river annually. On the Columbia river there are 200 boats and 400 men engaged in the sturgeon-fishing industry.

The manner of preparing the sturgeon for market is as peculiar as is the method adopted for catching the fish. The useless parts of the body of the sturgeon are first removed and it is then cut into sections or strips about 24 inches long. These strips are then placed in galvanized iron pans which hold about 60 pounds each. The pans are placed in a freezing mixture of packed ice and salt and allowed to remain until their contents are frozen solid. The fish thus frozen is wrapped in paper and packed in cases, and thus shipped to Chicago and New York. On reaching its destination it is thawed out, for it remains frozen all the way across the continent, it is dipped in lime and smoked. When ready for market in its smoked state it retails at from 18 to 20 cents a pound, and it is really a highly palatable article of food. Much of this smoked sturgeon doubtless reaches the markets of the Northwest as "prime smoked halibut," and its rich flavor has perhaps been extolled for years among the knowing ones of the Northwest who prided themselves on their thorough knowledge of the merits of the great flat fish. Sturgeon, which for many years was the "Royal" fish of England, is entitled, however, to tickle the palates of the residents of the Northwest as "smoked halibut," and the deception, which applies to name only, need not be questioned when the merit of the article itself is not impaired in the least. Four firms are now engaged in the business of freezing and shipping sturgeon caught in the Columbia river. In 1893 these firms shipped 2,081 tons of sturgeon, 714 kegs of caviar, averaging 135 pounds each. This caviar is principally shipped to Hamburg, Germany, where it finds a ready sale.

TROUT STREAM NEAR TACOMA.

Off Cape Flattery and extending north along the shore of British Columbia to Alaska, are fishing banks where immense quantities of halibut and black cod are caught. The banks off the cape are about 15 miles in length and they are at an average depth of from 35 to 75 fathoms below the surface. These are the fishing banks resorted to by the deep-water fishermen of Puget Sound and Portland. Halibut are abundant on the banks from March until late in the summer. The grounds here then become infested with dog fish and sharks which run off the edible varieties of fish. The halibut varies in weight from 5 to 250 pounds. Large quantities of this fish are annually caught by the Macah Indians, with whom it is a staple winter food.

The black cod is the most delicate and exquisitely flavored of all the fish of the North Pacific waters. It is taken in deep water, at from 30 to 300 fathoms depth. The cod caught off Cape Flattery weigh from 10 to 24 pounds each, although instances are not infrequent where this fish has been caught weighing as high as 50 pounds, and of over four feet in length. Of the other varieties of food fish caught on these banks, the buffalo cod is the largest. Its flesh is white and well flavored, and when fresh, it is an excellent table fish. It averages from 10 to 25 pounds in weight. The rock cod is a smaller fish than the black cod. It is found in great abundance at the mouth of the Columbia river and in the waters of Puget sound. A dozen fishing schooners are engaged at the banks near Cape Flattery. These boats carry their catch to Seattle and Tacoma, where it is shipped by rail south and to Eastern points.

There are 28 varieties of the rock fish family found in Pacific Coast waters. These range from the S. rubra to the S. niger, commonly called bass. All of the family are excellent food fish and they find a ready market. The principal varieties of the smaller food fishes caught in these waters are the herring, smelt, sardine and eulachan. The latter, from its excess of oil, is also known as the candle fish. This fish, in its dried state, will burn as clearly as a candle. It is taken by the natives in large quantities at Nass river, British Columbia. From the fish the Indians extract an oil which resembles soft lard. It is used by them as an article of food. In the early spring immense numbers of herring are found in Puget Sound and in the bays along the coast. This fish is equal in quality to the herring of the Atlantic. Establishments for the curing of herring are located on San Juan Islands and at other points on the Sound.

CATCHING CRABS, LOW TIDE, TACOMA.

The Pacific Coast sardine resembles in taste, quality and appearance the sardine of the Mediterranean. This is not the same fish as is canned on the Atlantic coast, and sold as sardines throughout the country. This small fish swarms at the entrance of the rivers and bays along the coast and it affords a splendid opening today for the establishment of a sardine cannery somewhere in the Northwest. Monster whales are frequently seen off Cape Flattery and the Oregon coast. The species which frequents these waters is known as the California Gray. Oil fish, dog fish and ground fish also abound, and, like the whale, are valuable chiefly for their oil. About $200,000 worth of this oil is manufactured annually at Friday Harbor, on San Juan Island.

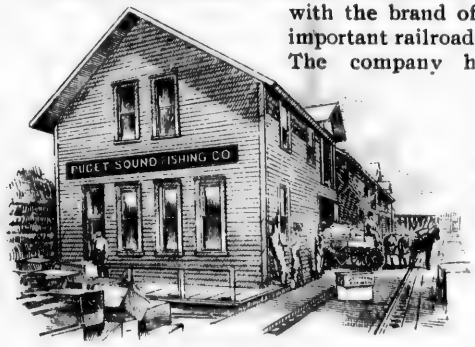
The United States fish commissioners, influenced, no doubt, by the fact that carp is considered a great delicacy in some parts of Europe, planted large quantities of this ugly, unpalatable and sluggish fish in the numerous ponds of Oregon and Washington some years since. These fish, during the freshets, escaped from the ponds into the Columbia and its tributaries, and these waters are now alive with this unwelcome fish. The carp is nothing less than a nuisance, and it is of no practical value. Catfish, of the smaller variety, is another pest in the waters of the Columbia and its tributaries. This fish is also a fish transplanted from Eastern waters, Some years ago shad were planted in the Sacramento. This desirable table fish has since worked its way up the coast to the Columbia where it is now regularly caught in large numbers.

The succulent little oyster found on the Pacific coast is much smaller than is the variety of the Atlantic coast. This has often led to Eastern tourists visiting the cities of the Northwest calling for a half dozen raw, when it takes 60 or 70 of the Pacific coast oysters to cover a plate. What the local oyster lacks in size, however, it makes up in quality. The transplanting and propagation of Eastern oysters here has already met with success, and active steps are now being taken to ship and transplant large quantities of oysters from Chesapeake Bay to the Pacific coast waters. The oyster-beds here are found at the headwaters of Puget Sound, near Olympia, at Willapa Harbor, on the Washington coast, and in a few other favored spots. At Yaquina Bay, south of the entrance to the Columbia river, is found what is known as the rock oys-

ter. This is a distinct species from the oyster of commerce proper. It is found imbedded in the soft rock just outside the bay at low tide. It has a soft shell, it is possessed of a delicious flavor, and is highly prized as an article of food by the residents near Yaquina. It is not obtainable in sufficient quantities to prove anything of an article of commerce. The oyster-beds of the Sound cover an area of 335 acres, and the output of these beds last year amounted to 560 sacks a week during the season. The total output of the year was valued at about $43,000. Ten thousand sacks of clams are also dug on the Sound, principally by the Indians. The Willapa Harbor clam-beds cover about 500 acres, and the output of oysters and clams from these beds, in 1893, was valued at $80,000.

At Yaquina Bay a fishing industry of considerable importance has recently been built up. A large part of the fresh fish supply of Portland is obtained from this source. All the bays and inlets along the coast are alive with fish. Under the head of Yaquina Bay will be found a detailed mention of the fishing interests of that part of the coast. Like the many other industries of the Northwest, that of fishing is yet in its infancy, and the development of this industry will add materially to the prosperity of a section that is one of the richest in natural resources in the United States.

THE PUGET SOUND FISHING COMPANY.—The Puget Sound Fishing Company, of Tacoma, is the largest concern of its kind on Puget Sound. Fish boxes labeled with the brand of this company can be seen at all the important railroad stations between Tacoma and Chicago. The company has unexcelled cold-storage, freezing and transportation facilities, and it is thus enabled to give the consumer, 2,000 miles or more away, salmon, cod and halibut as fresh as when the fish were first taken out of the water.



PUGET SOUND FISHING CO., TACOMA.

The Puget Sound Fishing Company does a large local business, and it ships thousands of pounds of fish to the towns of Oregon and Washington. It handles all kinds of fresh and salt fish, and also makes extensive shipments of oysters and clams. The president of the company is Chester Thorne, C. W. Griggs is vice-president, H. L. Achilles is treasurer. The office of secretary is filled by George Browne, while E. A. Chase is the efficient manager.

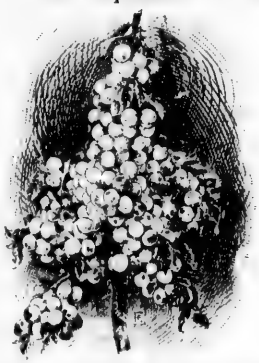
WHERE FINS AND FEATHERS MEET.—The delicious natives of sea and river described in the foregoing article and the four-footed and feathered game of Oregon are found in their recurring seasons at Malarkey & Co.'s fish and game stand, on the corner of Fourth and Morrison streets, Portland. The royal Chinook, the glittering silversides, the speckled trout, the succulent oyster, the timid quail, the web-footed mallard and the Mongolian pheasant, daintiest of the feathered tribe are found here as fresh and appetizing to epicurean palates as in their native elements. Malarkey & Co. is the only Portland firm dealing exclusively in fish, game, poultry and oysters.

CHLOPECK BROTHERS.—This well-known Pacific coast firm, with headquarters at the foot of Alder street, Portland, are among the leading packers and shippers of fresh, salted and smoked fish in Oregon and Washington. Their output includes all

the varieties of fish caught in the Pacific ocean and tributary rivers, such as salmon, sturgeon, smelt, herring, soles and flounders. Fresh fish packed in ice are forwarded East by this firm during the season, and the number of cases of salmon which they ship each year would seem almost incredible if given to the readers of "The Handbook."

THE BALTIMORE MARKET.—The Baltimore market, with Portland headquarters at 290 First street, is conducted by Messrs. G. Covach and John Bercovich. This market is always stocked with every variety of fish found in the waters of the Columbia river, Puget Sound and the fishing banks of the Pacific ocean. The best of oysters, clams, muscles and other shell fish are also found at this stand. Patrons of the Baltimore market are supplied at all times with fine poultry, and a special fine selection of game is always kept in stock during the open season. Messrs. Covach & Co. also do a wholesale shipping business, at the Baltimore market, under the firm name of the Pacific Coast Fishing Company.

The Willamette Valley, Oregon.—Of all the fertile valleys of the Union no one surpasses in richness or extent the famous Willamette valley of Oregon. This beautiful stretch of land extends from the Columbia river on the north south to the Calipooia Hills, a distance of about 130 miles. The valley for its entire length is inclosed on either side by mountain ranges. To the west lies the low Coast Range, the summits of which are distant from 20 to 38 miles from the ocean. East of the valley rises the great chain of the Cascade Mountains, with its many peerless snow-capped peaks, the most prominent of which is Mt. Hood, which rises to a height of 11,225 feet. Between the slopes of these two ranges there is an average width of 60 miles of valley land. This is the garden spot of Oregon and, with its perennial green verdure, it is one of the most inviting spots on the coast.



SILVER PRUNES RAISED IN THE WILLAMETTE VALLEY.

The total area of the Willamette valley is 7,800 square miles, or 4,992,000 acres, all of which is highly fertile. From the Coast Range on the west numerous streams flow into the Willamette river, the great water-course of Western Oregon. The principal of these streams are the Tualatin, Chehalem, Yamhill, La Creola, Luckiamutte, Mary's river, Long Tom and Calipooia rivers. The springs and melting snows of the Cascade Mountains give birth to numberless small creeks which, uniting, form the Clackamas, Molalla, Pudding, Santiam and McKenzie rivers, all of which flow westward and empty into the Willamette river.

The Willamette is one of the principal tributaries of the Columbia. It is navigable for a distance of more than 125 miles from its mouth. At Oregon City, the oldest settlement in the valley, and now a great manufacturing center, the river falls 42 feet, over a solid rock dam. This is at a point 12 miles south of Portland. The Willamette falls at Oregon City, with possibly one exception, furnish the greatest available water power at any one place in the United States. Boats pass the falls of the Willamette through a complete system of locks, open all the year. On the east side of the river the main line of the Southern Pacific runs from Portland to San Francisco. This skirts the waters's edge at Oregon City. The west side division of

this same road runs south through the Willamette valley west of the river, terminating at Corvallis, 96 miles south of Portland.

It was the government offer of 360 acres of land to every person who would settle in Oregon that first attracted permanent settlers to the Willamette valley. These early pioneers, many of whom are now living, dispensed hospitality with a lavish hand. No immigrant arriving in the valley in the early days of its settlement ever suffered for want of provisions, whether he had money or whether he was penniless. Although time has silvered the locks and bent the forms of these early settlers, their deeds are still as fresh as is the green of the perennial verdure of the beautiful valley in which they live. The Willamette valley is today the best settled portion of the Pacific Northwest. From its northern to its southern limit it is a succession of orchards, the blossoms of which perfume the air as early as March and April, finely kept farms and waving wheat fields Many of these orchards were planted prior to 1850, and the gnarled trunks and limbs of their trees show plainly the ravages of time, but the ripe and juicy fruit they bear each season gives no evidence of impaired quality over what this same fruit was a quarter of a century ago. All kinds of fruit indigenous to the temperate zone is grown to perfection in the Willamette valley. Of late years, fruit culture in the valley has become one of its most important and remunerative industries. The prunes grown in Western Oregon are absolutely perfect, surpassing in quality and size the same fruit grown in California, Italy and France. In any prune orchard of the Willamette valley a stem a foot long can be broken from a prune tree here with 50 large prunes hanging to it. To the prospective settlers in the valley prune raising offers many inducements. Land capable of making good prune orchards sells here for from $15 to $80 an acre, the price depending on the locality and whether or not it is cleared. The expense of setting out a prune orchard in the valley is about $18 per acre for a choice selection of young trees. In three years from the time of planting the trees begin to bear, and in four or five years they are in full-bearing condition.

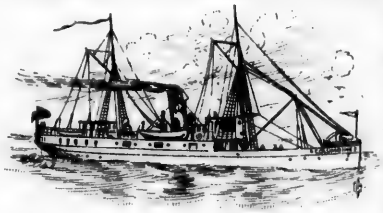
A WILLAMETTE RIVER SCENE, PORTLAND'S SUBURBS.

Another important farming industry of the Willamette valley is hop culture. The yield of hops per acre on the lands of Western Oregon is from 1,500 to 2,000 pounds. The average price of hops is 18 cents per pound. The estimated cost of raising and marketing hops is from 8 to 10 cents a pound. The great crop of the Willamette valley today, however, just as it was 10 years ago, is wheat. The prolific soil of this section of the state yields millions of bushels of wheat annually. During harvest time a traveler journeying through the valley sees a vast field of golden grain, broken here and there by forest-fringed streams, orchards, hop yards and pastures. Thirty successive crops of wheat have been raised on the same land in the Willamette valley, and the yield each season was not less than 25 bushels and as high as 50 bushels to the acre. The average yield of wheat on the valley lands is perhaps not as high as 25 bushels to the acre, as practical farmers will understand, but this land is perfectly adapted to the growing of all

UP-RIVER STEAMBOATS AT DOCKS, PORTLAND.

kinds of cereals. In addition to cereals, the lands of the valley grow nearly everything raised in any part of the United States except tropical fruits and the peculiar products of the Gulf States.

The elevation of the Willamette valley ranges from 70 feet at the base of the falls at Oregon City to 400 feet at the southern extremity. Scattered through it are broad prairies, separated by streams shaded by strips of woodland. The soil of these prairies consists of decomposed volcanic rock and a large proportion of alluvial deposits and vegetable mould. This soil is unsurpassed in fertility, and it is capable of producing successive crops without any sign of diminution for generations. Above the broad stretches of prairie land are what are called the foothills, which extend entirely around the prairie and merge into the mountain slopes. These rolling lands lie at an elevation of from 500 to 2,000 feet, and are covered with brush. At present this high land is utilized only for the raising of stock. When cleared of brush much of this upland, however, is as productive as are any of the best valley lands. Lying above the foothills, on the slopes of both the Coast and the Cascade ranges of mountains, are forests of fine merchantable timber. The timber belt on the slopes of the Cascades is about 20 miles in width. The proximity of this vast amount of fine timber is of the greatest economic importance to the inhabitants of the valley, and in time it will find its way to many of the outside markets.



U. S. LIGHT HOUSE TENDER, COLUMBINE, ON PACIFIC COAST WATERS.

At the northern end of the Willamette valley, 12 miles south of the confluence of the Willamette and Columbia rivers, is Portland, the metropolis of the Pacific Northwest. Portland, with the other leading centers of population of Western Oregon, is fully described in "The Handbook." In connection with the mention of each of these places considerable space is devoted to the principal characteristics of the tributary country from which they derive their support. The towns of Western Oregon are among the oldest settlements of the Northwest, and they are all prosperous, depending for their support on the richness of a tributary farming district that has never yet noted the failure of a crop.

Portland, Oregon.—Near where the Willamette river swells the volume of the great Columbia is Portland, the metropolis of the Northwest, and a city of 92,000 inhabitants. Unsurpassed in the beauty of its surroundings, pre-eminent in its wealth

PORTLAND IN 1858.

per capita, containing a cultured and prosperous people, this fair city occupies a proud position among the leading commercial centers of America. To Portland flows the

steady stream of wealth from the valleys, mountains and waters of a region covering an area of 1,000 miles square.

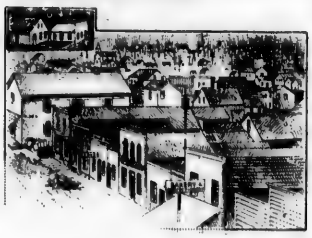
Although inland 120 miles from the ocean, Portland is regularly visited by ships flying the flags of all maritime nations. At its doors is the greatest water power at tide-water in the world. Immediately adjacent to the city are the greatest forests of America. A few miles distant from its business center is an immense deposit of iron ore, which has been successfully mined for years past. In its tributary country are mines which annually produce millions of dollars in gold and silver. Near Portland are vast areas of land possessing a soil unsurpassed in fertility. Between the city and the ocean are the finest fresh-water fisheries in the world. This remarkable city is the commercial, manufacturing, financial and educational center of a country possessing perhaps a greater diversity of valuable resources than any other part of the United States.

FRONT STREET, PORTLAND, IN 1852.

The development of the frontier village of 1846 into the magnificent Portland of today furnishes the text for a most interesting story. Even before the first cabin was built at the big bend of the Willamette, where Portland now stands, Oregon had witnessed many stirring events. A brief sketch of the early settlement of Oregon is a fitting introduction to an extended description of its chief city. The growth of Portland was only possible when the development of the state had reached a point of sufficient importance to demand the establishment of a leading trade center within its limits, and Portland has taken no step forward during the past 25 years which has not had its influence on the prosperity of all of Oregon.

Like a romance reads the early history of Oregon. Charmingly portrayed in the narratives of Astoria and Bonneville, by Washington Irving, it is familiar to all readers of American literature. Eloquently told in the rough but impressive language of the frontiersman, it became a part of the household tales of many a Western home. From the time that Lewis and Clark and their intrepid followers first looked upon the broad waters of the Columbia river, men led by a spirit of romance and adventure, or a desire to better their fortunes, have journeyed across the plains and over the mountains to the fertile valleys of Oregon. When the United States, just recovering from the devastation wrought by the War of Independence, was plunged into another momentous struggle with England, there was a settlement on the Oregon coast called Astoria. Over this fort, established in 1811, by John Jacob Astor, floated the first American flag swung to the breeze on the Pacific coast. Not long, however, did this banner wave, for one day a British warship cast her anchor in the river opposite the fort and forced the little garrison established there to surrender. Then followed the treaty of Ghent, which provided for the restoration of all territory taken by either nation during the War of 1812. Both Great Britain and the United States claimed Oregon

OREGONIAN BUILDING IN CORNER.

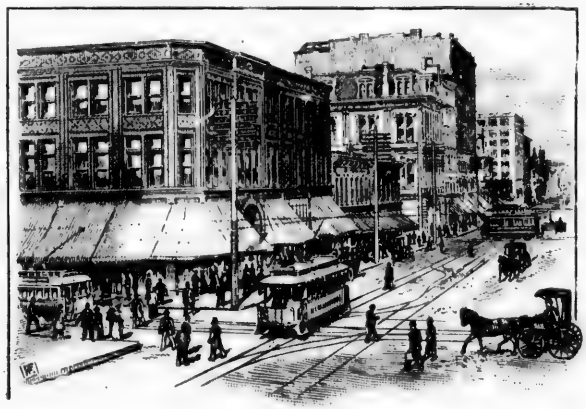


PORTLAND IN 1854.

by right of discovery, or by purchase, and until 1846 the Oregon controversy occupied the attention of American and English statesmen.

Finally this dispute over the contested territory was settled by the establishment of the international boundary line at the 49th degree of north latitude, thus ceding Oregon to the United States. The territory of Oregon then embraced all of the present state of Washington, Idaho and Montana lying west of the Rocky Mountains. Before the treaty of 1846 was made, Oregon was occupied jointly by the Hudson's Bay Company and a small but determined band of adventurous Americans. This great fur monopoly was master of the field it occupied. But ill fared the individual or company who interfered with its traffic or who questioned its exclusive right to trade with the Indians of Oregon. In 1829 Fort Vancouver, now a United States military post, seven miles distant from Portland, was selected as the headquarters of the Hudson's Bay Company. At this post lived Dr. John McLoughlin, the uncrowned monarch of the vast domain lying between the waters of the Pacific ocean and the Rocky Mountains.

PHOTO. BY TOWNE.



THIRD AND MORRISON STREETS, PORTLAND.

As chief factor of the Hudson's Bay Company, McLoughlin had absolute control over the lives and property of the 600 employes of the company. Subsequently he became an American citizen. Among the ferns and flowers in the old cemetery at Oregon City there is today a plain marble slab which marks the last resting place of a man who, during his life, was the guiding spirit of Oregon's destiny; a man who settled many vexed questions of the most serious import to the future welfare of the great state, and it is this little grave which contains the dust of Dr. McLoughlin, that will ever remain a sacred spot in the minds of the people of the great commonwealth who commemorate a name that was worthy only of brave and noble deeds.

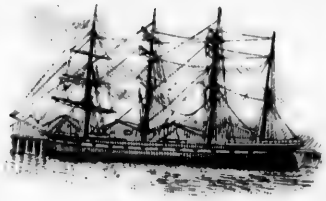
At the time the treaty of 1846 was made the Hudson's Bay Company had 45 officers and 513 articled men, all working together to maintain its supremacy and power. Its 23 forts were located at points of vantage extending east as far as the Bitter Root valley, in Montana. The few Americans in Oregon prior to 1840, braved many appalling forms of death. Absolutely without protection, except that afforded by their rifles and knives, many of these men fell an easy prey to the hordes of savages who roamed over the country. Along the river, from Portland to the sea, are today many historic spots, the scenes of deeds of heroism performed by these men, whose names will always be held in veneration by the people of Oregon.

Stories of the beautiful valley of the Willamette, the wonderful fertility of its soil and the perennial greenness of its verdure, circulated by trappers returning to the States, caused the first great immigration to Oregon of the 40's. The first immigrant train to cross the plains reached Oregon in 1842. Other trains followed, until for the first time, American interests were in the ascendency in the territory so long held under the sway of the Hudson's Bay Company. At that time Oregon was a debatable ground, over which the United States refused to extend its jurisdiction. Here were several thousand people without the protection of the law, and without the protecting arm of their own government, which they had the right to lean on. These people petitioned Congress for relief but their prayers were answered only by sarcastic speeches, which displayed the narrow statesmanship and poor wit of the senators uttering them. In Congress, at the time, however, were two loyal and staunch supporters of Oregon's claims. Both of these men were from the state of Missouri. The senate chamber vibrated with the eloquence of Louis F. Linn, who introduced the bills which provided for the donation of land to all who would settle in the territory of Oregon. Pointing his prophetic finger to the West, Senator Thomas Benton, in glowing language portrayed the possibilities of an American road to India and the Orient; a vision that has since been realized and which has earned for Benton an immortal name among the galaxy of great American statesmen. The American residents of Oregon, finding their demands for protection ignored by the Federal Government, established a temporary civil government of their own in 1843. They perfected a code of laws which would protect their rights to home and liberty, and it was thus that the brave little band of Oregon pioneers rendered the greatest support to the United States in holding the territory here for the republic at the very time when the government was laboring under the misguided sentiment that it had no use for Oregon.

FIRST STREET, PORTLAND.

THIRD AND WASHINGTON STREETS, PORTLAND.

Thus, though never wavering in their allegiance to the United States, the Americans in Oregon became citizens of a republic of their own creation. The most serious thing which this early pioneer government of Oregon had to contend with was an outbreak of the Cayuse Indians, on November 29, 1847. The red fiends murdered the brave missionary, Dr. Marcus Whitman, and his associates, at a point near the present site of Walla Walla, Washington. The death of these brave men was quickly and effectively avenged. A regiment of 14 companies was recruited and equipped by the provisional government and this force moved to the front. Two battles with the red skins were fought, in which the Indians were completely



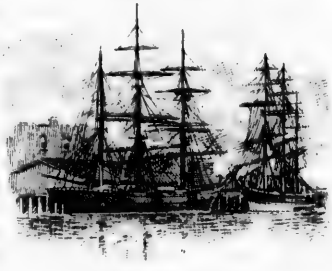
A FOUR-MASTED SHIP AT PORTLAND'S DOCKS.

routed. The savages were driven out of their country and they were not allowed to occupy it again until they had delivered up five of their guilty ring-leaders, who were tried, convicted and executed at Oregon City.

On August 13, 1848, President Polk signed the bill creating the territory of Oregon, and on the third day of March, 1849, General Joseph Lane, the first territorial governor, issued his proclamation assuming the control of the government of Oregon. Thus the pioneers of Oregon were making history before the greater portion of the United States was settled. Oregon can justly lay claim to one of the older established settlements of the Union. It has always been inhabited by a brave set of men, intrepid to a degree that allowed no enterprise which they ever undertook to record a failure; never wavering in their allegiance to the United States government, and the prosperity of the country they occupied must be taken as attesting the zeal of the right kind of manhood, which is worthy of a grateful remembrance by the people of a later generation who occupy a fertile country which these early pioneers had conquered.

In the early history of Oregon, before the settlement of Portland, Oregon City, at the falls of the Willamette, 12 miles south of the present great city, was the capital and the chief city of the territory. It was well understood by the pioneers of Oregon, that somewhere between the city at the falls and the confluence of the Columbia and Willamette rivers must be located the future metropolis of the Pacific Northwest. St. Johns, Milwaukie, Linnton, St. Helens and Milton were formidable candidates for this honor before Portland was even thought of. All these towns are now interesting and picturesque settlements, most of them being suburbs of Portland, but they have never attained distinction as trade centers, and the village conditions which governed their existence before the first cabin in Portland was built are the conditions which surround them at the present time.

A series of fortunate incidents, combined with the indominable pluck and the untiring energy of its pioneer citizens, made Portland the principal town in Oregon, after it had experienced many vicissitudes. Long before the first white man set foot on the site of the present great city with the intention of assuming the ownership of its land, a member of Lewis & Clark's expedition had landed his canoe at the big bend of the Willamette river and camped in the lodge of an Indian chief who told him wondrous stories of the great tribe of the Calipooias many days distant towards the mid-day sun. In 1843, years after this, an adventurer, whose antecedents and subsequent career are unknown, stepped ashore and claimed the spot on which Portland is now located. This was William Overton, a man whom it is rumored afterwards met his death in Texas at the end of a rope. Overton disposed of one-half of his claim to A. L. Lovejoy, and a few months later he sold the remaining portion of his holdings here to F. W. Pettygrove.



SHIPS THAT VISIT PORTLAND.

In 1845 the bark Toulon, from Massachusetts, sailed up the Columbia river and cast her anchor in the Willamette in front of Portland. This was the beginning of a commerce that has made Portland one of the great American seaports. From 1845 to 1849 the history of Portland does not differ from that of struggling frontier settlements. The arrival of a ship here was the greatest event which could happen to break the monotony of the rude, primitive lives of the settlers here. In 1848 Pettygrove sold his interest in the townsite to D. H. Lownsdale for $5,000 worth of leather, specie not then being current in Oregon. The discovery of gold in California, in 1849, marked a new epoch in the history of Portland, and it was from that year that the present city really dates its birth.

PORTLAND, REGULAR COASTING STEAMERS AT DOCKS.

The thousands of people who rushed to the California gold mines depended largely upon Oregon to furnish them with the supplies necessary for their existence. Fruit, vegetables, lumber and flour sold in San Francisco for fabulous prices. Cargoes of these products shipped from Portland to San Francisco netted the owners enormous profits. A consignment of 200 pounds of apples was sold for $500. The beautiful red and golden apples from the Willamette valley were eagerly purchased at one dollar each by the Argonauts of California. It was from the profits derived from this trade that the foundation of many of the large private fortunes of Portland were laid. In 1852 rich mineral discoveries were made in Southern Oregon, and in 1862 gold was discovered on the Salmon river in Idaho. A stampede was made to these camps, and Portland, by virtue of her position, became the supply point for these diggings. The output of these mines, consisting of millions of dollars worth of bullion and gold dust, was sent to Portland for shipment to the mints. Ships leaving Portland in those days frequently carried consignments of half a million dollars in gold. This was a period of great business activity in which careful business men could rapidly accumulate a fortune. Thoroughly understanding the laws of supply and demand and taking advantage of the exceptional opportunites for the acquirement of wealth, the early merchants here accumulated, or were instrumental in bringing to the city, the money that has made Portland a great financial center, and, in proportion to its population, one of the richest cities in the world.

A CHINA STEAMER AT PORTLAND'S DOCKS.

Many of these pioneer business men are now multo-millionaires, and much of their wealth is invested in the hundreds of imposing buildings that adorn the streets of Portland.

The establishment of a newspaper at Oregon City and one at Milwaukie caused the people of Portland to induce Thos. J. Dryer, a journalist, to bring an outfit to Portland and establish a paper here. On December 4, 1850, the first issue of this paper was printed. It was called THE OREGONIAN. Thus was born the great metropolitan daily of today, which for 44 years has mirrored the thoughts and protected the interests of the Pacific Northwest. THE OREGONIAN was purchased in 1861 by Henry L. Pittock, and in 1865 Harvey W. Scott became its editor, a position he has held continuously with the exception of

a short interval extending from 1872 to 1877. In 1892, Messrs. Pittock and Scott, the present proprietors of the paper, built the palatial OREGONIAN building, mention of which is found in another part of the present article.

In 1851, Portland became an incorporated town. Three years later Multnomah county was created and Portland was made the seat of justice From that time the town progressed rapidly, attracting to it wealth and the best elements of society. To this inland seaport on the Willamette came the best representatives of the best classes of the east. The dregs of European society have not yet reached the Pacific coast in any considerable numbers. This turbulent element, which divides itself into clans, lives in squalid quarters and antagonizes American institutions, has no existence at Portland. The beauty of the city and the purity of its municipal government are not marred by the debasing influence of foreign paupers. Portland is distinctly an American city. It is the home of a progressive, intelligent and cultured people. Society is graded here as it is elsewhere, but social differences are not so apparent in Portland as they are in the East. The working men of Portland are a sturdy, intelligent and thrifty class of men, imbued with that spirit of progress and desire for advancement that characterizes every industrious man living in the Pacific Northwest.

The Portland of today owes none of its greatness to forced growth, caused by real estate booms. There has been but little of this kind of speculation in Oregon. To natural causes alone is the advancement of the city to be attributed. The causes which conspired to make it the metropolis of a region 1,000 miles square will continue to contribute to its growth, wealth and prosperity. The steady growth of Portland from a struggling village to a magnificent city of 91,000 inhabitants can be accurately traced. The local census taken in 1857 credits the town with a population of 1,280. Three years later there were 2,917 people here. In 1862, Portland had 4,057 inhabitants, and in 1865 the population of the city had increased to 6,058. The United States census of 1870 gave the city a population of 9,565. In 1875, the population was 13,470, and in 1880 it was 17,578. This growth was taking place at a time when Portland did not have rail connection with the rest of the United States, and it was

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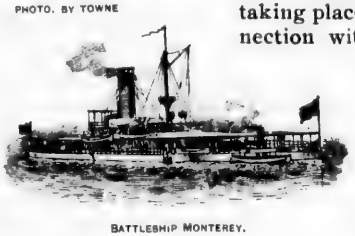
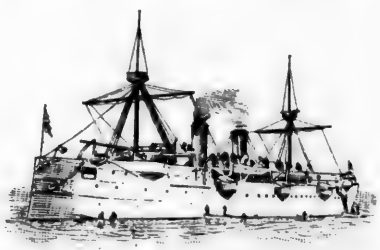
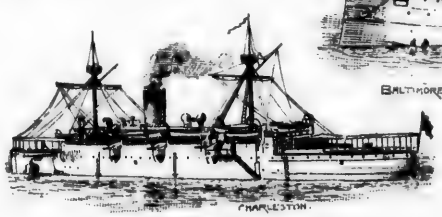


BATTLESHIP MONTEREY.



BALTIMORE.



CHARLESTON.

UNITED STATES WARSHIPS THAT HAVE VISITED PORTLAND.

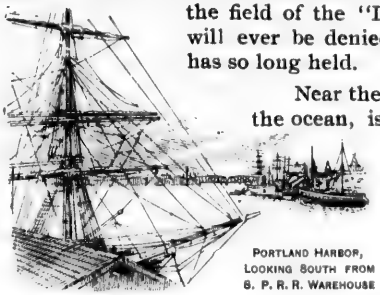
due principally to the city's position as the natural commercial center of the North Pacific coast. In 1885, it is estimated that the population of Portland was 26,000, and the United States census of 1890 gave Portland a population of 46,385. Since the last government census was taken, however, the old municipalities of East Portland, Albina, Sellwood and the adjacent suburbs, which were always a part of Portland proper, have been consolidated with that part of the city formerly known as Portland, and lying on the west bank of the Willamette. Consolidated Portland, by the carefully compiled directory of 1893, contains 90,785 inhabitants. Thus has grown the commercial and manufacturing, financial and educational center of the Pacific Northwest. The country of which it is the metropolis is a most magnificent one, in distances, resources and beauty.

PORTLAND.
A STEAM COAST FREIGHTER

Stretching from the Columbia river to the Cascade hills, a distance of 130 miles, is the valley which was the magnet that attracted the first large immigration to Oregon. This is a land of flowers, orchards, gardens, hop yards and wheat fields, a beautiful valley in which, beneath the snow-capped summits of mighty mountain peaks grass remains green the year round. This magnificent sweep of land is known as the Willamette valley. It is the primary cause of Portland's greatness. Possessing a soil of unsurpassed fertility, this valley has produced enormous crops without diminution for over 30 years past. It will undoubtedly take centuries of constant tillage to wear out this soil, and owing to the peculiar climatic conditions existing here a failure of crops is considered by the residents as an impossibility. At the dawn of civilization the valley of the Nile sustained a population of 7,000,000 people. From this it can be adduced that the Willamette valley with its 7,800 square miles of highly fertile land, under the conditions of modern tillage, can alone support 5,000,000 people. The trade of this valley alone is sufficient to support a large city, yet the valley is but one of the many tributary sections from which Portland derives its business. Lying east of the Cascade Mountains is a vast natural amphitheatre of magnificent dimensions. Surrounded on all sides by high mountain ranges, this "Inland Empire," as it is called, covers an area of thousands of square miles of the most fertile cereal-producing land in the world. It is today the great granary of the West. Throughout this section flow the mighty Columbia river and its tributary, the winding Snake. The waterway of the Columbia is the key which unlocks to Portland the trade of the "Inland Empire." This river is and will always remain the great highway between the cereal-producing region of the Pacific Northwest lying east of the Cascade Mountains and the markets of the world. The transcontinental line of the Union Pacific railroad strikes the Columbia at Umatilla, in Eastern Oregon and from this latter point follows the river to within a few miles of Portland, 187 miles further west. Branch lines of this railroad tap the famous Palouse, Walla Walla and other countries, sections all famous for the fertility of their soil and the abundant yields of wheat which they produce to the acre. The bulk of the 14,000,000 bushels of grain annually exported from these sections is hauled by the Union Pacific railroad to Portland. At the latter point it is loaded into vessels and carried to England. The mere fact that Portland

PORTLAND HARBOR—LOOKING NORTH FROM MORRISON-STREET BRIDGE.

is the port from which this grain is shipped, would give it a decided advantage in competing for the trade of the rich agricultural country east of the Cascade Mountains. The jobbers of Portland have always been able to undersell all competitors in the field of the "Inland Empire" and it is doubtful if Portland will ever be denied the principal trade of this section which she has so long held.



PORTLAND HARBOR, LOOKING SOUTH FROM S. P. R. R. WAREHOUSE

Near the mouth of the Columbia river, a few miles from the ocean, is Astoria, the first American settlement on the Pacific coast. This old city, with its quaint legends and romantic history, is now the base of operations for fishing industries whose annual output is valued at over $3,500,000. Columbia river salmon is a staple article of food in nearly all parts of the world. It is related that a traveler, lost for days in the pathless sand of an Egyptian desert, found imbedded in the sand a tin labeled, Columbia River Salmon. Over 450,000 cases of can containing this delicious fish are now exported annually from Astoria and neighboring towns. There are also shipped from the Columbia river to Eastern markets 3,000 tons of sturgeon and 1,000 kegs of that epicurean relish called caviar. Along the Oregon and Washington coast are numerous bays and indentations from which enormous quantities of fish are regularly exported. The trade of the principal part of these fisheries is monopolized by Portland. From this source the city derives several million of dollars revenue a year.

Another industry that contributes its quota of wealth to Portland is the raising of sheep. Oregon now ranks fifth in the list of sheep-raising states of the Union. The state is admirably adapted to the successful handling of this industry, the peculiar climate, soil and vegetation being such that sheep almost invariably improve after being imported here, especially in the quality of their wool. The sheep-breeders have carefully selected the best breeds, and on the bunch-grass-covered hills and in the luxuriant grass-carpeted valleys of the state there can be found enormous flocks of the most fancy breeds of sheep in the world. The wool clip of Eastern Oregon amounts to about 17,000,000 pounds a year, nearly all of which is marketed at Portland.

Early in the 50's gold was discovered in Oregon and since that time the mines of the state have yielded over $60,000,000. This production is now going on at the rate of about $1,600,000 a year, a greater portion of which by the laws of trade finds its way to Portland. There is yet lying dormant in the mountains of the state untold millions in mineral wealth. All the natural wealth tributary to Portland, however, is not hidden under the earth. Over 25,000 square miles of the mountain and coast lands of Oregon are covered by a growth of valuable timber unequaled in extent and in the size and merchantable value of this timber in America. Many of the tapering masts seen in the merchant ships that sail the ocean come from the forests of Oregon. Douglas fir, or Oregon pine, is famous the world over as a ship timber. At the Toulon dockyards, at the great ship yards of England, and at the ports of all maritim-

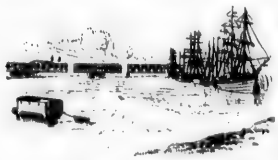
LOOKING SOUTH FROM STEEL BRIDGE, PORTLAND.

nations its superiority over all other wood for spars, masts and ship timbers is conceded. From an economic standpoint the proximity of this vast forest is of the most signal importance to Portland. It reduces the cost of building to a minimum here and supplies the city with a cheap fuel. The manufacture of lumber is now one of the most important industries. In addition to the large timber preserves of Oregon, that part of the state of Washington bordering on the Columbia, which is heavily timbered, is also a part of Portland's tributary territory. A large part of the logs for running Portland's sawmills are taken from the shores of the Columbia river within both the limits of Oregon and Washington. It is impossible at the present time to foretell what the growth of the lumbering industry of the states of Oregon and Washington will be in the future. It is generally admitted by lumbermen, however, that it is but a question of a few years at most when the East, by the rapid depletion of its forests, will be compelled to look to the Pacific Northwest for its supply of lumber, the demand for which is now enormous and which is yearly increasing.

WAITING FOR "DRAW" TO OPEN, PORTLAND.

The development of the resources of the country of which Portland is today the leading center of population, did not really begin until late in the 60's. About that time the Pacific Northwest commenced to export its products. As early as 1873 the foreign exports of Portland aggregated $2,000,000 a year, and the coastwise shipments from this port at that time were about $3,000,000 a year. Prior to 1873, the shipments annually from Portland to San Francisco frequently amounted to over $7,000,000 in value, but the bulk of these shipments was bullion taken from the mines east of the Cascade Mountains. The commerce of Portland steadily increased in subsequent years, keeping pace with the rapid settlement of the Pacific Northwest, until today Portland is the greatest shipping port of the coast outside of San Francisco.

From the mountains of Southern Oregon the Willamette river flows north through the beautiful valley of the same name until it finally empties into the Columbia, twelve miles south of Portland. It is at the bend of the Willamette and at the mouth of the Willamette valley that Portland is located. The city is built on both sides of the river, the main business district being on the west side. The former municipalities of East Portland, Albina and Sellwood, now a part of Portland, are located on the east bank of the river extending for a distance of several miles up and down the stream. These two natural divisions are connected by four bridges which span the Willamette, two of these bridges being free. The most important of these bridges, that at Burnside street, is now nearing completion. Work was commenced on this structure in 1892. Its cost will be about $300,000. It has a total length of 1621 feet and a width of 46 feet in the clear. When open for traffic it will be one of the finest bridges of the West. The other free bridge spanning the Willamette at Portland is the Madison-street, in the southern part of the city. Between Madison and Burnside streets is located the Morrison-street bridge, which is owned by a private corporation. This bridge occupies, perhaps, the most valuable site for a bridge in the city, it connecting the business center of Portland with the most thickly settled portion of the east side districts. North of the Burn-



"DRAW" STEEL BRIDGE OPENING.

side street bridge is the steel railroad bridge. This bridge is used by the great lines of railroad centering at Portland. Above the railroad track is a deck used for teams and foot passengers. All the bridges of Portland are substantially built. They are all crossed by lines of city and suburban cars except the Burnside street.

STARK-STREET FERRY—PORTLAND. STEAM YACHT IN FOREGROUND.

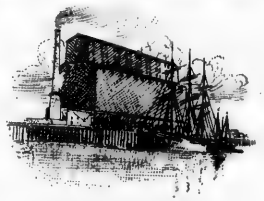
Portland is romantically located in the midst of a diversity of charming pastoral, river and mountain scenery, the whole forming a panorama of enchanting beauty. Far to the east, forming a background to the broad stretch of orchards and gardens, are the Cascade Mountains, in plain view of the city. Surmounting this range are Mounts Hood, St. Helens and Adams, extinct volcanoes. The view of these snow-capped peaks is the most entrancing scene that Portland offers to its visitors. Standing out distinct above all the other mighty sentinels of the Cascades in plain view from Portland is Mt. Hood. This peak is about 50 miles due east of Portland. It rises to a height of 11,225 feet above sea level. Its sides are covered with perpetual snows, and the view of this mountain presented to the gaze of the people of Portland is the most entrancing of any view of Hood gained from any other part of the state. Far to the northeast of Hood the reflection of the morning sun can be seen on the glacier-lined sides of Mt. St. Helens and Mt. Adams. When the conditions of the atmosphere are favorable, two other peaks in addition to those mentioned above can be seen from Portland. Though over 100 miles distant, Mt. Rainier, the monarch of the Cascades and the pride of Tacoma and Seattle, is plainly visible from the tower of THE OREGONIAN building or from the eminence back of the city. Mt. Jefferson being nearer than Rainier, reveals more of its glory when seen from Portland. This latter peak, however, is seen at its best from some of the points in the Willamette valley south of Portland.

Extending along the south bank of the Columbia river, and along the west bank of the Willamette river, from the ocean to Willamette falls, are highlands ending in the Scappoose or Portland hills. From the bank of the Willamette, at Portland, a gradually rising stretch of country extends back for a distance of one mile, ending abruptly at the base of these hills. It is on this level strip that the original townsite of Portland was laid out. The distance from north to south between the points where these hills approach the river banks is two and one-half miles. Along this chain of hills are six prominences which attain an altitude of from 800 to 1,000 feet. These are Willamette heights, King's heights, Portland heights, Robinson's hill, Marquam's hill and South Portland heights. On all of these higher elevations have been built costly residences, and these sites furnish some of the more attractive building spots in the city. The hills back of Portland finally culminate in Mount Zion, of an altitude of over 1,000 feet. West of this eminence is Humphrey's Mountain, which commands the prospect towards the Tualatin plains and the Coast Mountains. After the summit of the hills back of Portland is reached, a broad and fertile plateau, extends away for miles, forming what is one of the most highly fertile parts of Portland's tributary section.

THROUGH THE "DRAW"—PORTLAND.

Scattered among the Portland hills are great ravines and narrow canyons which, with a profusion of wild flowers and forest growth, form many bits of romantic scen-

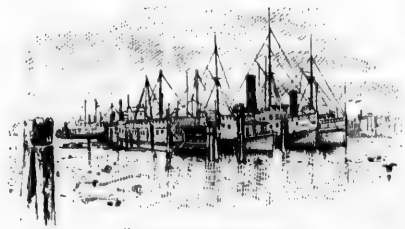
ery and innumerable picturesque nooks. From the highest points of all the eminences of these hills a magnificent view of mountain scenery, rivers and plains, can be obtained. To the northeast the Columbia river can be seen flowing out of the great gorge of the Cascade Mountains. This great river, locked in the embrace of the Cascades, forms the only pass through this great range at the level of tide-water. From Portland to the gorge of the Columbia, called the dalles, there is a panorama of some of the finest river and mountain scenery in the world. Tumbling precipitously from turreted cliffs, hundreds of feet high, miniature rivulets are dashed into spray as they fall to the rocks below. Some of these waterfalls are of surpassing beauty. Famous among these falls are Multnomah and Latourelle, which are the scenes of many gatherings from Portland and the surrounding towns during the summer months.



LOADING WHEAT, ELEVATOR, PORTLAND.

Lying below the hills back of Portland are the business houses and fashionable residence districts of the city. The business district commences at the water's edge. Extending along the water front are three miles of warehouses, docks and shipyards. The river at Portland is from 30 to 60 feet deep. On its surface at Portland is ample room to float hundreds of the largest sea-going vessels, and it is at all times the scene of a great traffic which reaches from Portland to all parts of the Northwest on navigable water, and to all coast ports and the Orient.

Steamboating on the Willamette and Columbia rivers dates from the launching of the Lot Whitcomb, at Milwaukie, on Christmas day, 1850. The Whitcomb was a 600-ton boat. She proved a bonanza to her owners. The fare by the Whitcomb, from Portland to Astoria, a distance of about 100 miles, was $15, and freight rates were proportionately high. In 1862 the traffic and travel on the river assumed great proportions. Following the discovery of gold in Idaho, the boats plying on the Columbia and Willamette rivers did a large and lucrative business. Freight rates from Portland to The Dalles were then $15 a ton, while it cost $60 to haul a single ton of freight from Portland to Lewiston in the early 60's. The great steamboat company of Oregon and Washington, in those days, was the Oregon Steam Navigation Company. This company was organized December 29, 1860. For years it operated a fleet of swift and handsome steamers on the waters of the Willamette and Columbia rivers. By means of two short lines of portage railroad around the cascades and the gorge of the Columbia above The Dalles, this company operated a continuous line between Portland and Lewiston, on the Snake river, the principal city of Northern Idaho. In 1879 its entire property was turned over to the Oregon Railway & Navigation Company. The amount involved in this transfer was the enormous sum of $5,000,000. The successors of the Oregon Steam Navigation Company purchased a fleet of swift modern iron steamships for the route between Portland and San Francisco. The entire property of the Oregon Railway & Navigation Company, including the river and ocean fleet of boats, subsequently passed under the control of the Union Pacific Railway Com-



"THE BONEYARD"—PORTLAND.

pany by lease. In addition to the fine fleet of fast passenger and freight steamers operated by the Union Pacific between Portland and San Francisco, the company also operates a line of boats between Portland and Astoria and intermediate points, between Portland and the principal towns of the Willamette valley located on the river, and from Portland to The Dalles. In addition to the boats operated by the Union Pacific, there are about 13 navigation companies which make their headquarters at Portland. These companies own steamboats with an aggregate registration of over 100,000 tons.

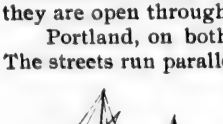
STEAMER T. J. POTTER-PORTLAND.

Continuous navigation of the Columbia river from the ocean to the grain fields of Washington and Idaho is now prevented by obstructions at the cascades and above The Dalles. The United States government is now building a ship canal around the rapids at the cascades, at a cost of $3,553,403. This work will be completed by the end of the present year, when boats will be able to ascend the river from Portland or the sea to The Dalles. After the canal at the cascades is completed, immediate steps will be taken to overcome the rapids above The Dalles, probably by means of a ship railway. With the completion of the latter work the Columbia will be navigable, without obstructions, as far as Lewiston, Idaho. The completion of these improvements will be of the greatest importance to the agricultural and commercial interests of the country adjacent to the river. When the Columbia and Snake are opened to free navigation to Lewiston, employment will be found for at least 100 additional steamboats and barges.

STEAMSHIP COLUMBIA-PORTLAND-SAN FRANCISCO ROUTE.

The Willamette river is now navigable throughout the year from Portland to Corvallis, a distance of over 100 miles and at certain seasons of the year, boats ascend the river as far as Eugene, 130 miles distant by rail from Portland. In addition to the Willamette, its principal tributary, the Yamhill river, is navigable at all seasons to Dayton, 45 miles south of Portland. The only obstruction to uninterrupted navigation in the Willamette river is at Willamette falls, 12 miles south of Portland. An efficient system of canal and locks has been constructed around these falls, and they are open throughout the year.

Portland, on both sides of the river, is attractively and symmetrically laid out. The streets run parallel to each other. Of the 148 miles of improved streets in Portland, 45 miles are macadam, seven miles are planked, four miles are paved with stone and three and one-half miles are asphalt or bituminous rock. Two of the finest paved streets in the city are Morrison and Sixth, paved with asphalt from Trinidad Lake. The cost of these improvements was, respectively, $67,697 and $53,366.04. All of Portland's streets are thoroughly lighted by electricity, 600 arc lamps of 2,000 candlepower being used for this purpose. In addition to the arc lamps, 800 incandescents of 25 candle-power each are used for street-lighting purposes. The plant supplying the electric current for these lights is located at the Willamette falls, Oregon City. This power is generated b the power furnished by these falls. The extensive works



STEAMER VICTORIAN-PORTLAND.

of this company, and the extent of the great water power at Oregon City, are fully described in the article on Oregon City, immediately following the article on Portland.

STEAMSHIP OREGON—PORTLAND-SAN FRANCISCO ROUTE.

The business district of Portland is compactly built up with large, substantial and imposing brick buildings. The business streets are paved with asphalt, bituminous rock, granite blocks and vitrified brick. The first street back of the river, running parallel with the stream, is Front. This, with lower First and Second streets, is the great wholesale thoroughfare of the city. The jobbing trade of Portland aggregates $135,000,000 a year. The commercial agencies rate 22 firms of Portland as having a capital in excess of $1,000,000, four firms with resources over $750,000, seven firms with over $500,000 capital, 18 firms with assets in excess of $300,000, 21 firms doing business with a capital of over $125,000, and 35 firms rated above $75,000. These houses have no serious competition outside of Portland. They have practically driven San Francisco merchants out of this field, and direct trade with the East by the merchants of the interior of Oregon, Washington and Idaho has in most cases proved so unsatisfactory that these merchants now buy the most of their goods in Portland.

STEAM YACHTS ON THE WILLAMETTE AT PORTLAND.

Front street is lined with four, five and six-story substantial stone and brick buildings, admirably adapted to the purposes for which they are used. This street is paved with Belgian blocks, as is also First street. First street, from Ankeny south, is lined with retail stores. This street has long been the principal retail district of the city. In recent years the retail district, owing to the encroachments of the wholesale trade, has moved back several blocks, and, today, Third is perhaps the best retail street of the city. Between Washington and Morrison streets there is a large amount of business done on Fifth and Sixth streets, and it is the opinion of many careful observers that Sixth street, a few years hence, will be one of the great business thoroughfares of the city.

To the stranger, Second street is one of the most interesting of Portland's principal thoroughfares. On this street, in the center of a large and progressive American city, is a colony of aliens, whose customs, habits and religion do not differ from those of their ancesters who lived over 2,000 years ago. It is here that the Chinese quarters of Portland are established. The Chinese shops, with their queer ornaments and assortments of Oriental wares and Chinese delicacies, the theaters, restaurants and joss houses are in striking contrast to the aspect of the business district by which they are surrounded.

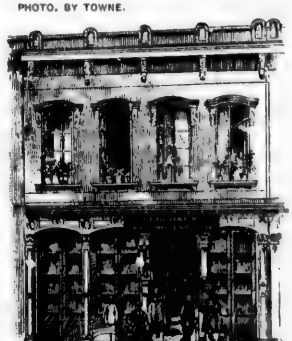
BUILDING OCCUPIED BY CHINESE, PORTLAND.

Seid Back, the distinguished merchant of Portland, was born in China in 1852. He passed his boyhood days working on a farm for his parents and immigrated to the United States at the age of 18. He reached this country in a penniless condition. He immediately after his arrival located at Portland, where he found work in the drudgery of housework, which he followed just long enough to master the more responsible duties of a cook, which latter vocation he followed for a number of years subsequently. Since that time the career of this man has been one of constant progress. He mastered the English language until, today, he talks this tongue as fluently as any native-born American; he studied carefully the customs and politics of this country until he became as well versed in our affairs as the best informed of business men; he embraced Christianity and became an earnest though not fanatical teacher of its doctrines, and, as a man of affairs at the present time, his opinion is as eagerly sought in the best informed business circles as is that of the best known merchant of the city. Seid Back is now a wealthy citizen, and his life shows the best traits of the Chinese character. He is a living example of the opportunities afforded in this country for advancement, and it can be taken as an object lesson by that class of foreigners who decry our form of government, who rail against the rich, but who seem totally incapable of that earnest and honest effort which alone can lead to success.

SEID BACK PORTLAND.
LEADING CHINESE MERCHANT AND CAPITALIST.

In 1876 Seid Back was married to Quay Thoy, a young Chinese maiden, who had also come to this country from her native land. The marriage took place at the First Baptist church here and was largely attended. Seid Back started into business here in a modest way, his capital at the time being but $3,000, which he had saved from his earnings. The premises first occupied by this merchant were in the old building at the corner of Third and Washington streets, where the stately Dekum block now stands. Here he engaged in a general Chinese merchandise business, in connection with which he conducted a contract labor bureau, and it was in this occupation that he laid the foundation of his present princely fortune. About 10 years ago he removed to his present quarters at 129 Front street, an illustration of which is shown in connection with the present article. He now does business here on the ground floor, occupying the upper story of the building for family rooms. In addition to his business on Front

PHOTO. BY TOWNE.



STORE, SEID BACK, PORTLAND.

street, he is also the head of the Wing Mow Lung Company, which does a business of $200,000 a year outside of the revenue derived from sub-letting a number of buildings on Second street, erected by the company on ground held under long-time ground-rent leases. The company imports all kinds of Chinese merchandise, such as clothing, teas, rice, sugar, nut oil, fire crackers, table delicacies, etc., and they export American staple products, such as flour and lumber, in large quantities.

Seid Back, in his individual right, now owns Portland property which, at a conservative valuation, is worth about $200,000. He holds stock in a large number of American and Chinese enterprises, including bank and insurance companies. He has been one of the heaviest contractors for Chinese labor on the coast. He recalls the time when he had 700 men contracted to the Northern Pacific, 400 to the Oregon Railway & Navigation Company, and 500 to the Southern Pacific. The contracting business has largely fallen off during the past few years, but Seid Back even today furnishes regularly from 150 to 200 men a year, principally to the salmon canneries.

Seid Back is easily the representative of his race in the Northwest, and in private life he can be said to be as prominent as any Chinaman in the United States. He devotes a considerable part of his time and attention to aiding his fellow countrymen, and has carried many a native of the Mongolian race through some temporary difficulty. He has a wife and one child, a son. This boy, Seid Gain, although only 16 years of age, is already a bright, alert young business man, and he is a great help to his father in handling his large business interests here. The boy is as proficient in the English and Chinese languages as is his father, and it is on the son that the father places great hopes for the future. Seid Gain will conduct his father's business when the old gentleman reaches the time of life where he will want to retire and enjoy the fruits of his industry in travel and recreation.

CHAMBER OF COMMERCE BUILDING—PORTLAND.

Only one block above Second street is Third, the principal retail street. Third street is well paved with bituminous rock, and it is lined on both sides with imposing buildings. Among the stately structures which line this street are the Chamber of Commerce building, the Dekum and Hamilton blocks, Worcester block, Forbes & Breeden building, and other fine edifices. The Chamber of Commerce block is a fine building, finished in 1893, at a cost of $500,000. The Portland Chamber of Commerce is a representative body of progressive business men who have done much for the welfare of their city. This body, together with the Oregon State Board of Immigration, with headquarters at Portland, regularly furnishes to the world a large lot of valuable information pertaining to Portland and the state, and letters of inquiry, addressed to the secretary of either of these organizations will be promptly answered.

Facing Fourth street, between Salmon and Main, is the county court house, a plain, unpretentious building, occupying, with its ground, an entire block. Across the street from the court house, between Third and Fourth, is the public square known as the Plaza. Immediately south of the Plaza, the new city hall is in course of construction. This will be one of the

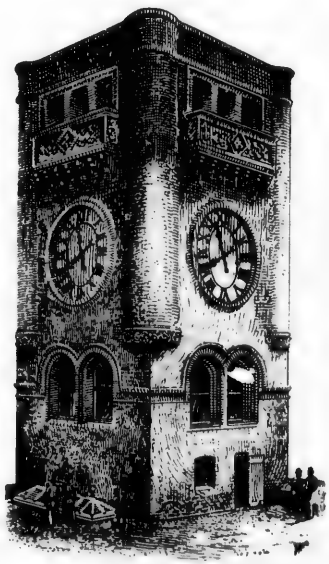
PROPOSED NEW COURT HOUSE, PORTLAND.

THE OREGONIAN BUILDING IN 1854.

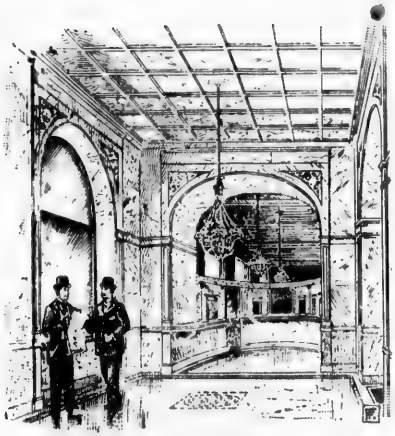
finest public buildings in Portland. Its cost will be about $500,000, for which purpose the city of Portland has issued bonds. The building will be completed during the present year.

The best constructed building in Portland, and one of the finest pieces of architecture in the West, is the magnificent OREGONIAN building, located at the intersection of Sixth and Alder streets. Work on the construction of this building was commenced early in 1891, and it was finished in the spring of 1893. This stately structure is nine stories in height, surmounted by a massive tower, the top of which is 194 feet above the curbstone of the street below. The building is absolutely fireproof, being built throughout of stone, brick, terra cotta and steel. From the tower of THE OREGONIAN building is commanded the best view of Portland and the snow-capped peaks of the Cascades obtained from any other point in the vicinity of the city. The building is occupied by THE OREGONIAN, one of the great papers of the West. The part of the building not used by THE OREGONIAN is rented for stores and offices. The service in this building is perfect, tenants being supplied with water, heat, lights and all of the conveniences found in any of the finest buildings of the East. THE OREGONIAN building is one of the attractions which Portland has to offer for the inspection of visitors, and the building, with its press room, is open at all times for their inspection.

THE OREGONIAN BUILDING, PORTLAND.

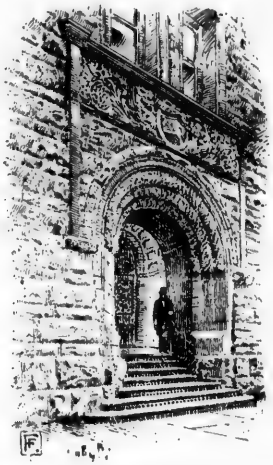


TOWER, OREGONIAN BUILDING AS SEEN FROM ROOF.

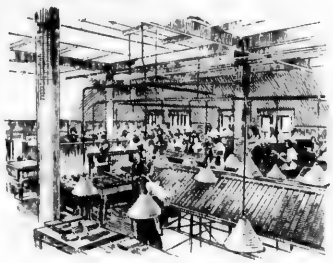


LOBBY · BUSINESS OFFICE.

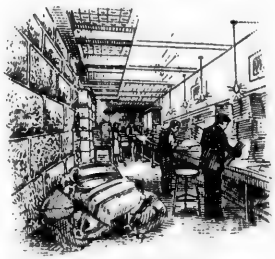
PHOTO. BY MOORE.



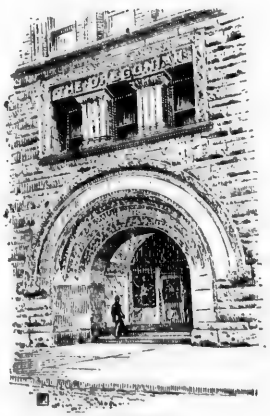
ENTRANCE TO BUSINESS OFFICE.



A SECTION OF THE COMPOSING ROOM.

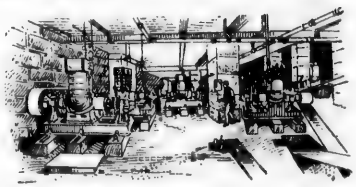


MAILING ROOM.



MAIN ENTRANCE.

STEREOTYPING ROOM.



DYNAMO ROOM.

VIEWS OF THE OREGONIAN BUILDING.

HOTEL PORTLAND.

One block above THE OREGONIAN building, on Sixth street, is the Hotel Portland, a fine structure of a novel architectural design. This hotel was erected by a syndicate of Portland capitalists, at a cost of $750,000. The Hotel Portland enjoys the distinction of being one of the best conducted hotels in the United States. Opposite the Hotel Portland, and facing on Sixth and Morrison streets, is the Marquam Grand Opera House. The auditorium in the Marquam is one of the neatest theatres of the West. The view of the Marquam, published in connection with the Portland article, will show that the building is of a very imposing style of architecture. Near the foot of Sixth street, the massive and imposing union depot for the united railroad lines centering in Portland, is now nearing completion. The cost of this structure will be $400,000. The Italian style of architecture has been closely followed in the lines of this edifice. The main station of the depot is 515 feet in length. It is surmounted by an artistic clock tower 132 feet in height. Connected with the depot is an elaborate system of terminal grounds which cover about 70 acres.

MARQUAM GRAND OPERA HOUSE.

THE GOODNOUGH BLOCK.—This building, corner Fifth and Yamhill streets, was erected in 1892. The material is brick and stone. The interior finish is in stained woods. The building is lighted throughout by electricity and gas, and the water is supplied from an artesian well on the premises from a depth of 160 feet below the street grade.

PHOTO. BY TOWNE.

GOODNOUGH BLOCK, PORTLAND.

There are no dark offices in the Goodnough block, the interior offices being lighted by a large light-well in the center of the structure. This affords light and ventilation for the entire structure. The elevator is the largest in Portland, carrying 20 passengers. The sanitary conditions of the building are perfect. The toilet rooms are located in a separate brick shaft outside of the main building. On the first floor are five stores. Five stories of the building are used for offices and the sixth by the Portland Business College. The building is a credit to the city in which it is located.

Among the leading Oregon houses is the Snell, Heitshu & Woodard Company, of Portland, who conduct one of the largest wholesale drug houses on the coast. The business of the company covers a very large territory, and they carry one of the most complete lines of drugs and kindred goods handled by any house in the United States.

The Snell, Heitshu & Woodard Company occupy one of the best-built and most

attractive business blocks in the city. It is a five-story stone structure, built of stone taken out of the celebrated Tenino quarries, and is a substantial and striking piece of architecture. It has a frontage of 130 feet on Sixth street, 95 feet on Burnside and 42 feet on Ankeny. One notable feature is a 10-foot driveway extending through the building from Burnside to Ankeny street, thus enabling teams to deliver merchandise under cover in all weather and with great rapidity. Carloads of goods, which formerly took three hours to handle, can now be easily disposed of in three-quarters of an hour. The cost of the building and the land it occupies was $130,000. In the large basement are placed the boilers, engines and necessary machinery connected with the building. This basement is also used for storage purposes. The first floor of the building is divided into offices, shipping-room and the sundries department, while the stories above are devoted to the various drug departments and to storage purposes. The building is admirably arranged throughout, and it makes one of the most creditable drug establishments in the country.

PHOTO BY TOWNE.

WHOLESALE DRUG HOUSE, SNELL, HEITSHU & WOODARD CO., PORTLAND.

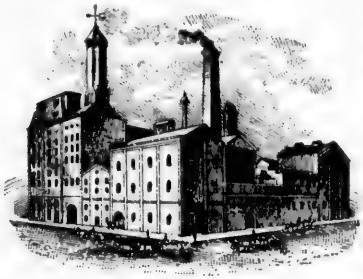
The stock of the Blumauer-Frank Drug Company consists of drugs, patent medicines and druggists' sundries, embracing everything in this line from the smallest of toilet articles to the rarest and most expensive drugs in the market. The *personnel* of the Blumauer-Frank Drug Company is strong. The senior member, Mr. L. Blumauer, started in business as a retail druggist about 15 years ago. He was finally enabled to devote his entire attention to his large jobbing trade. When he reached this point he associated himself in business with Mr. Emil Frank. Subsequently Mr. Frank sold his interest in the company when it was reorganized, with Mr. L. Blumauer as president; Mr. Sol. Blumauer, vice-president; Mr. Phil. Blumauer, treasurer, and Mr. J. P. Bronaugh, secretary.

BLUMAUER-FRANK DRUG CO., PORTLAND.

Henry Weinhard's brewery is located on the block bounded by Burnside, Couch, Twelfth and Thirteenth streets. The cooper shop, stables for 32 horses, wagon sheds, etc., are located on the half block directly opposite the brewery, while the bottling establishment is located three blocks east of the same on a prominent corner occupying 50x100 feet.

The spacious office is on Thirteenth and Burnside streets. The malt-house has a

frontage on Twelfth street of 96 feet and a depth of 130 feet on Burnside street. A large elevator with a capacity of 750 bushels per hour takes the barley up into the storage bins. The engine room is located on Couch street adjoining the stock houses. It contains two refrigerating engines of 35 tons capacity each, two brine pumps, a powerful air pump, boiler feed pump, an engine of 50-horse power, also an engine and a dynamo of the most approved pattern for lighting the whole establishment. The necessary steam power is generated in four steel boilers which can either be run separately or combined, and which also furnish the 80-horse power engine in the malt-house with steam.



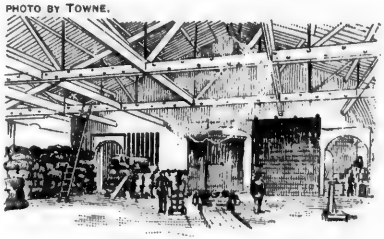
BREWERY, HENRY WEINHARD, PORTLAND.

There are three artesian wells used by the brewery. One is used exclusively for the needs of the ice machinery. The other one is for furnishing the water for the brewery and cleaning purposes, while the third one is only used for the malt-house. Weinhard's brewery gives employment to 46 men, including clerks, engineers, drivers, etc.

Taken altogether, the impression on leaving the brewery, after having seen everything, is that it is impossible to find a similar establishment more complete in every detail, especially the malt-house with its kiln tower high in the air, 176 feet from the ground. The tower makes a nice and an imposing appearance.

Hahn's Terminal Warehouse occupies one-half block, 200x100 feet in size, on the corner of Tenth and Johnson streets. It is adjacent to the terminal yards, where all railroads entering Portland discharge freight. The building is a solid brick structure with a capacity of 1,500 carloads. Merchandise and goods of all descriptions stored are subject to the lowest insurance rates written in Portland. Tracks run directly into the warehouse, as is seen by the accompanying cut, and goods are received in the warehouse during all kinds of weather without damage. A great advantage of the track systems connected with the warehouse is that goods consigned here require but one handling instead of two, as in the other warehouses of the city. Goods can also be re-shipped from Hahn's warehouse to outside local points without extra cartage.

PHOTO BY TOWNE.



HAHN'S TERMINAL WAREHOUSE, PORTLAND.

PHOTO BY TOWNE.

MAHER & TERWILLIGER BLOCK, PORTLAND.

The Maher & Terwilliger block is a handsome three-story pressed brick building with stone trimmings, located at No. 651 First street. It was erected

in 1891 by Messrs. J. M. Terwilliger and W. L. Maher who constitute the popular firm of Maher & Terwilliger, butchers of South Portland.

The cost of the building was $25,000 and it presents a fine and imposing appearance. It is wired for electric lighting and has gas mains connection. Of the four large stores on the ground floor, one is occupied by Messrs. Maher & Terwilliger with their well appointed meat market. The second and third stories of the building contain 63 rooms which are occupied for lodging rooms. Mr. J. M. Terwilliger, the junior member of the firm, is the popular alderman from the sixth ward.

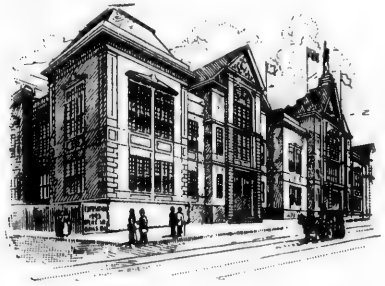
Among the handsome structures of that part of consolidated Portland known as Albina, the Smithson block, erected by A. J. Smithson in 1892, merits special mention.

PHOTO. BY OWNE.

SMITHSON BLOCK, ALBINA, PORTLAND.

The material used in the construction of this fine building was pressed brick. The interior finishing is in larch. The building is three stories high and presents an attractive appearance. The ground floor is divided into five stores. The corner and adjoining store are occupied by L. Blumenthal & Co., clothiers. The next two stores are occupied by the Oregon Mercantile Company, wholesale and retail grocery and crockery dealers, while the fifth store is taken by the Delmonico restaurant.

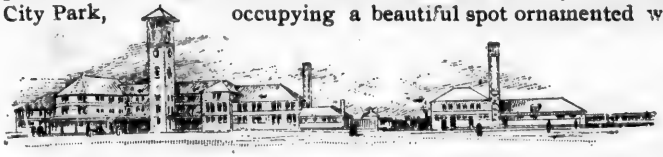
The upper stories contain 54 rooms, divided into suites. These rooms are handsomely furnished, lighted by electricity and supplied with the purest of water. The location is a convenient one, even for those who have business on the West Side, as it is reached by electric cars and by free ferry which connects Albina with Portland proper.



INDUSTRIAL EXPOSITION BUILDING, PORTLAND.

Among the leading business streets of Portland are Morrison and Washington, two thoroughfares running due west from the river. Both of these streets are lined with large, costly and substantial buildings. Near the head of Washington street, and about one mile distant from the river, is a large building which covers two full blocks. This is the building owned and occupied by the North Pacific Industrial Exposition. It was erected at a cost of $150,000. In this building are held Portland's great annual industrial exhibitions. The center of this mammoth structure is a music hall with a seating capacity for about 6,000 people. In addition to the above there are numerous other large and imposing buildings in Portland, many of which cost from $100,000 to $300,000 each. In that part of Portland on the east side of the Willamette river are a number of important retail business streets. The East Side, however, is principally occupied for residence purposes and in this part of Portland are some of the most tastily constructed residences on the coast. Along the water front of the East Side are a large number of mills, factories, docks and warehouses.

Scattered through the residence sections of Portland are a number of beautiful parks which add greatly to the attractiveness of the city. The largest of these is the City Park, occupying a beautiful spot ornamented with great banks of flowers, rustic bridges, ponds, walks and drives, which contrast strangely with the rugged beauty of pyramidal forest trees and deep fern-lined canyons. In the park is a large collection of wild animals and birds, among which are mountain lions, deer, cougars, elk, wild cats, bears, monkeys, coons, seals, kangaroos, eagles, parrots and owls. In Portland are 12 other parks and squares, all of which are characterized by a profuse growth of shade trees. The public grounds of the city have a combined area of about 700 acres, and the cost of improving and caring for these grounds has been about $20,000 a year for a number of years past. Equally as attractive as the city parks, however, are the tastily laid-out grounds which surround all the principal residences of the city. Portland is a city of beautiful homes. In the yards around the workingman's cottage and the pretentious mansion of the millionaire alike, blossoming roses perfume the air from March until December. In the residence portion of the city trees, flowers and shrubbery form continuous avenues of picturesque verdancy. Lying in the shadows of the forest-covered Portland hills is Nob Hill, the fashionable residence district of the city. Scattered through this attractive locality are handsome houses which have cost from $20,000 up to $100,000 each. Many of these fine homes occupy whole blocks which are beautifully decorated with trees, turf and flowers.



UNION RAILROAD DEPOT, PORTLAND.

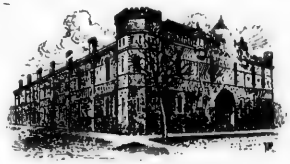
A PICTURESQUE DRIVE, NEAR PORTLAND.

POSTOFFICE, PORTLAND.

Among the most attractive features of Portland are the stately church edifices and quaint chapels found in every part of the city. The repeated expansion of the business district has resulted in several of these churches being surrounded by great business blocks. The first church of Portland was organized in 1848. There are now 70 congregations of nearly every line of theological thought represented in Portland. The first church in Portland was the First Methodist. Its pastor was Rev. J. H. Wilbur. In 1850 this congregation built Portland's first house of worship. The building stood on the corner of Third and Taylor streets, where the fine brick church erected by the same congregation some years later, in 1869, is located. The Catholic church of Portland was established in 1851. The members of this faith in the city now worship in six cathedrals and chapels.

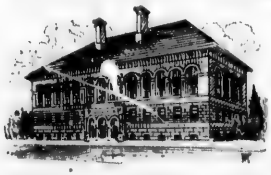
The supremacy of Portland as the commercial center of the Pacific Northwest dates, as before stated, from the time that gold was first discovered in California. By the force of circumstances and geographical position, the city has become the receiving and distributing center for a region 1,000 miles square. The two principal causes that have conspired to bring about this result are the Columbia and Willamette rivers. The distance from Portland to the ocean is about 120 miles. Of this distance 12 miles lies over the course of the Willamette river, and the rest of the way is via the Columbia. At extreme low-water mark there is today a channel 22½ feet deep between Portland and the sea. All ships that frequent the waters of the Pacific ocean can sail up the channel of the two rivers to Portland without difficulty. The citizens of Portland, with unparalleled enterprise, have organized themselves into a corporation called the Port of Portland. Under the supervision of officers of this corporation the sum of $425,000 has already been expended in improving and deepening the channel from Portland to the mouth of the Columbia river. This work should properly have been done at the expense of the general government, whose duty it is to make all necessary improvements to navigable water-courses. These improvements have already made Portland a seaport possessing many peculiar advantages. From its junction with the Willamette to where it widens as it enters the ocean, the Columbia river maintains an average width of over one mile. Its fresh waters free the ships entering this stream from the accumulations of barnacles gathered while in salt water. At Portland the waters of the Willamette effectively destroy those forms of marine life which are so destructive to docking and wooden piling at salt-water ports. There is sufficient room in the three-mile stretch of harbor at Portland to float hundreds of the largest sea-going vessels. There can be seen riding at anchor in this harbor ships hailing from all parts of the world and flying the flags of all maritime nations. Some of these vessels draw as much as 27 feet of water, and some of them are over 2,700 tons net register. It is at Portland that the railroads which tap the grain districts of Oregon, Washington and Idaho transfer their loads of wheat to the holds of ships bound for various ports of the Orient. The productions of the interior are carried to Portland, and from this point shipped to the markets of the world. The ships engaged in this export trade return to Portland with cargoes made up of the products of the nations they visit. This city is thus made the great clearing-house for the best part of the Pacific Northwest.

CITY HALL, PORTLAND.

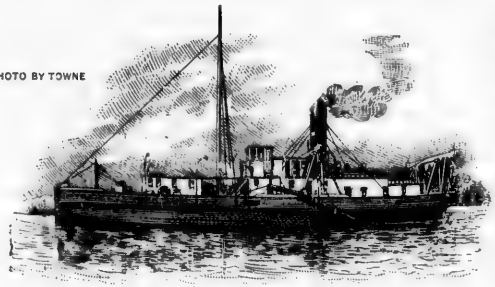


THE ARMORY, PORTLAND.

When the act was passed by Congress for dredging the Willamette and Columbia rivers, from Portland to the sea, it was found necessary to build a dredge of sufficient power to accomplish the heavy work contemplated by the act. A contract was let by the government to John F. Steffen, the well-known ship-builder of this city, in 1892, for the building of a hydraulic dredge. The boat was completed in 1893 at a cost of $65,000. It was named after W. S. Ladd, Portland's foremost citizen, recently deceased.



LIBRARY BUILDING, PORTLAND.

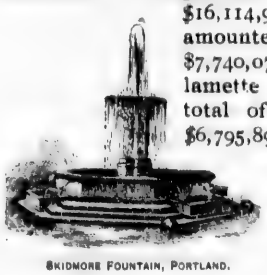


THE GREAT STEAM DREDGE, W. S. LADD.

The dredge W. S. Ladd is equal to almost any dredge in the United States in capacity and power, and is the first dredge of this class built on the coast. Her dimensions are: length, 146 feet, 6 inches over all; beam, 38 feet, 4 inches; hold, 12 feet. She is single-decked aft of the forward house and pilot house. The shaft alley is located under the main deck and forward of this in the order named are the engine room, boiler room, coal bunkers, dumping bins and crew space. The engines used are the Neafie & Levy compound, 17-34 twenty-fourths. The hold of the dredge has a capacity of 500 cubic yards. This hold is used as a dump for dredgings from the river bed. The builder, John F. Steffen, has just reason to be proud of his work on the W. S. Ladd. This together with the construction of some of the finest floating palaces on the coast which are from his yards, has entitled him to a position among the great boat-builders of the coast.

ARLINGTON CLUB, PORTLAND.

Portland, with its wealth, its facilities for transportation, and the enterprise of its business people, has secured control of the trade of the country, for which it acts as a receiving agent. Even before through-rail communication was established between Portland and the East, this city contained a population in excess of 17,000, and it occupied then the same relative position of commercial supremacy to the Northwestern field that it does today. This position was due primarily to the magnificent system of waterways which connect this city with Eastern Oregon and Washington and with all the best parts of the Willamette valley. This is an advantage which other leading trade centers of the Northwest concede to Portland, and it is a factor that will exert a decided influence in the contention which must arise in the future among the different cities in the competition for the trade of this vast region. The magnitude of Portland's commerce at the present time can be determined from the following statements: The aggregate value of all articles exported from Portland, in 1892, was $16,114,925. The foreign exports of the city, for that year, amounted to $8,340,655, and the domestic exports aggregated $7,740,070 in value. From the "Inland Empire" and the Willamette valley there came to Portland that year the enormous total of 4,702,050 centals of wheat, of an aggregate value of $6,795,895. Eighty-nine vessels carried this wheat to the markets of Europe. The exports of flour for the year amounted to 549,236 barrels, of a value of $2,182,250. In the same year the wool-growers of Eastern and Southern Oregon consigned to Portland, for shipment, 8,607,840 pounds of wool, worth $1,350,050. This was about one-half of



SKIDMORE FOUNTAIN, PORTLAND.

ST. VINCENT'S HOSPITAL, PORTLAND.

Oregon's wool crop for the year. Of the remainder of the wool crop, woolen goods to the value of $400,000 were manufactured at the woolen mills practically having their headquarters at Portland. In 1892 the canneries of the Columbia river, between Portland and the ocean, turned out 468,993 cases of salmon, valued at $2,608,020. In addition to this output, immense shipments of sturgeon, caught in the Columbia, were also made to the East from Portland. Oregon's hop crop for the year was valued at several millions of dollars. Considerable over one-half of this crop was bought by Portland dealers and shipped from here East. The value of the lumber exported from the city is now about $1,000,000 a year.

GOOD SAMARITAN HOSPITAL, PORTLAND.

The value of the imports annually received at Portland is about $1,600,000. The statistics of Portland's export and import trade for 1893 are not available at the present writing, but from present indications these figures will not differ materially from those quoted for 1892. Between January 1 and November 15, 1893, as shown by the records of the custom-house of Portland, 96 vessels entered from and 114 vessels cleared for foreign ports. During the same period 166 vessels arrived from and 137 departed for domestic ports. These figures will tend to show the magnitude of Portland's commerce. That the completion of the projected Nicaragua canal would cause this commerce to show a rapid and unprecedented increase hardly admits of a doubt. Ships from Portland for foreign ports that are now compelled to make a detour of thousands of miles around Cape Horn could, by utilizing the canal, make the journey between Portland and Liverpool in one-half the time now consumed in this trip. The completion of the canal would at once open up the markets of the Atlantic coast for the products of the Pacific Northwest, products which cannot at the present be profitably marketed East by reason of the high transportation rates on the long haul by rail or by ship around Cape Horn.

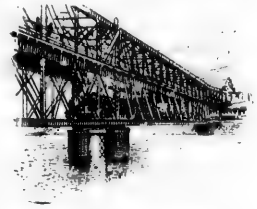
CHILDREN'S HOME, PORTLAND.

Portland is the terminus of three great transcontinental lines of railroads. These are the Union Pacific, Northern Pacific and Southern Pacific. The Union Pacific, which gains an entrance to the state over the tracks of the Oregon Short Line and the Oregon Railway & Navigation Company, both operated by the Union Pacific, follows the course of the Columbia river from Umatilla, 187 miles east of Portland, to a point about 20 miles distant from the city. Its branch lines spread out and tap the great wheat-producing sections of the Walla Walla, Palouse and other districts, as well as those of Eastern Oregon, comprising the great wheat belt of the Northwest. In that part of Portland known locally as Albina, the Union Pacific has established large machine and repair shops which furnish employment to about 400 men. The Southern Pacific operates 682 miles of road solely with the view of reaching Portland for a Northwestern terminus for its extensive system. The Northern Pacific railroad,

running south from Tacoma, crosses the Columbia river at Kalama and reaches Portland over its own track. The through passenger trains of this line are all made up in Portland, and this city is practically the western terminus of the heavy passenger traffic which regularly passes over this road. These great systems of railroads, their mileage, branch lines and the country they traverse are all fully described in an article in the present publication under the head of "Railroads of the Pacific Northwest."

RAILROAD STEEL BRIDGE, PORTLAND.

In the region tributary to Portland there is an inexhaustible supply of raw material to meet the demands of manufacturers. This, combined with commanding location, cheap fuel and the advantage of the second greatest waterpower in America, has already made Portland a great manufacturing center. Extensive beds of iron ore at Oswego, seven miles south of Portland, have been successfully worked since 1866. At Oswego are located the $500 000 blast furnaces of the Oregon Iron & Steel Company. But 12 miles south of Portland are the wonderful falls of the Willamette river. The Portland General Electric Company are now expending $2,500,000 in developing this water power which, next to Niagara, is the greatest available water power in the United States. At extreme low water the Willamette falls furnish an available power of 60,000 horse. About 10,000 horse power will be generated into electricity at the electric company's station at Oregon City and from that point transmitted to Portland where it will be used for running all kinds of machinery. This power is especially valuable from a manufacturing standpoint, and it is the claim of the electric company that they can supply power for running machinery in Portland much cheaper than the same power can be generated for by steam. The economic importance of this power to Portland manufacturers cannot be overestimated in connection with the future industrial advancement of this city.

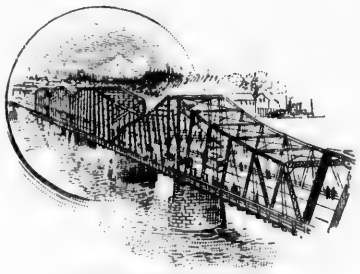


TRAIN CROSSING STEEL BRIDGE, PORTLAND

Around the falls of the Willamette are now clustered a number of very large manufacturing plants. Some of these plants are owned by Portland capital. These include woolen, flour and paper and pulp mills. The market that Portland manufactures for includes not only the whole Pacific coast, but also South America, the Sandwich Islands, China and Japan. The products of the mills and factories of Portland are staple articles of commerce in all these countries mentioned. Flour is shipped from Portland to Asia and lumber is sent by this city to the treeless plains of South America and Australia. To the towns of the Pacific Northwest Portland annually sends millions of dollars worth of finished products. There is probably no section of the United States that offers today inducements for the investment of capital in manufacturing enterprises that are afforded in Portland. With the available resources of timber, wool, hides, wheat, flax, iron, and wood for making paper pulp, the city pos-

FREE BRIDGE, MADISON STREET, PORTLAND.

sesses every advantage as a manufacturing center. Portland has the available water power to manufacture these products into the finished articles of commerce, and the city has every benefit of rail and ocean connection with all parts of the world. The output of the factories has steadily increased with each successive year since the first shipment of lumber was made from Oregon to the Golden Gate in 1849. The manufacturing industries of Portland today represent an investment of $19,000,000; they employ 12,000 men and they pay out annually in wages about $6,300,000. The annual value of the product of these industries is about $32,000,000.

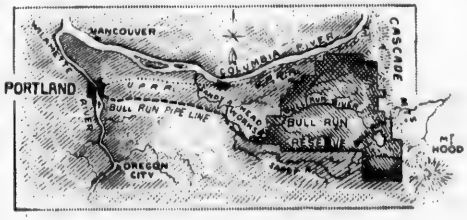


MORRISON-STREET BRIDGE, PORTLAND.

For many years past the city of Portland has derived its water supply from the Willamette river. The water of this stream, while not unhealthful, contains much foreign matter, especially during the winter and spring months, when the rains have caused it to rise above its usual height. The waters of this stream are frequently discolored by great quantities of mud washed into it. The river is also liable to pollution from the sewerage of the rapidly growing towns of the valley along its banks. As early as 1887 the citizens of Portland commenced to agitate the question of changing the source of the water supply of the city. Finally, by an act of the legislature which authorized the issue of $3,200,000 of water bonds, the city was placed in a position to perfect the water system so long contemplated. Thirty miles distant from Portland is the mouth of Bull Run creek. This clear mountain stream bubbles from the ground in the heart of the Cascade Mountains, about 11 miles distant from Mount Hood. A careful analysis of the water shows the absence of deleterious organic matter. Owing to the great volume of clear water which this creek carries, and the fact that the country adjacent to it is not open for settlement, thus avoiding all danger of pollution to the stream, Bull Run creek was selected as the source of the future water supply of Portland. By the close of 1894 the cold spring-fed waters of this creek will be flowing through the city mains of Portland. This system, when completed, will consist of the following improvements:

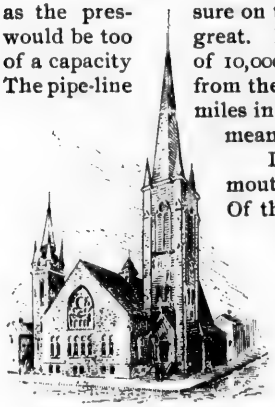
BULL RUN LAKE,
PORTLAND'S WATER SUPPLY

From the mouth of the creek a steel-plate pipe-line is laid, for a distance of 24 miles, to Mount Tabor, on which eminence are located two reservoirs, with a holding capacity respectively of 10,000,000 and 15,000,000 gallons. A cast-iron pipe connects the Mount Tabor reservoirs with the reservoir at City park, on the hill back of the business district of Portland. The latter reservoir is at an elevation of 300 feet above the city's base, and it has a capacity of 22,000,000 gallons. Water will be distributed from the City park reservoir only to the higher portions of the city,



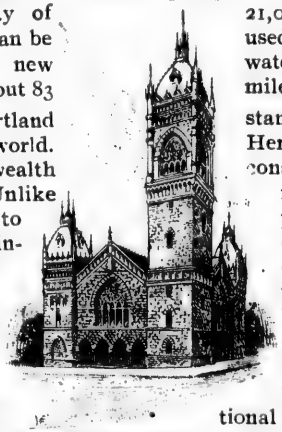
ROUTE, WATER PIPE LINE, BULL RUN RIVER TO PORTLAND.

as the pres- sure on the mains from this reservoir in the lower levels of the city would be too great. Below the City park reservoir 80 feet is a second reservoir of a capacity of 10,000,000 gallons, which is kept full from the reservoir above. The pipe-line from the Mount Tabor reservoirs to the City park reservoir is 6½ miles in length. It crosses the Willamette river at Clay street by means of a submerged pipe.



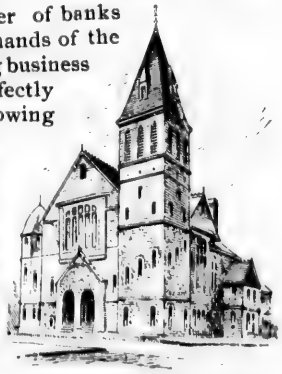
CENTENARY M. E. CHURCH, PORTLAND.

It is estimated that the volume of Bull Run creek, at its mouth, at extreme low water, is 70,000,000 gallons per day. Of this great available supply, 25,000,000 gallons will be carried off in pipes to Portland. This is a sufficient quantity of water to supply a city of 180,000 inhabitants. With the exception of the water forced through the pipes to the heights in the western part of the city, this entire water-works system is operated by gravity. The city has in reserve pumps having a combined capacity of 21,000,000 gallons a day, which can be used in case of accident to the Bull Run line. When the new water-works system is completed, the city will have about 83 miles of water mains.



FIRST CONGREGATIONAL CHURCH.

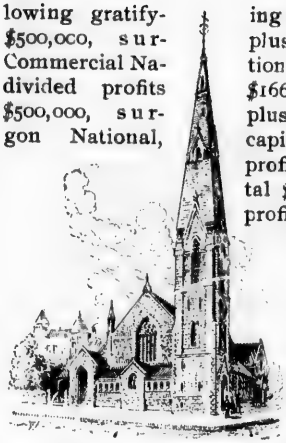
As a financial center, Portland stands pre-eminent among the cities of the same size in the world. Here there is a vast aggregation of corporate and individual wealth constantly seeking for profitable channels of investment. Unlike many other cities of the West, Portland is not compelled to place her reliance for money on Eastern capitalists. The principal wealth of Portland is owned and controlled by its own citizens. A large amount of this wealth is utilized by the great banking houses of Portland. This represents, however, but a small part of the aggregate wealth of the city. The first banking house in Portland was established by Wm. S. Ladd and C. E. Tilton, in 1859. This was the only bank in the city until 1866, when the First National Bank was organized, and when the Bank of British Columbia established a branch here. From that time the capital, stability and number of banks in Portland steadily increased, keeping pace with the demands of the rapidly growing tributary country. During the distressing business panic of 1893 several of Portland's banks, although perfectly solvent, were compelled to temporarily suspend payment, owing altogether to the unreasonable demands of frightened depositors. All of these banks were more than amply able to pay depositors in full. It is worthy of note in this connection that every national bank that closed its doors in Portland during the panic has since resumed business, and these banks are today on even a stronger footing than they ever were before. There are now but two private banks of the city that are in the hands of receivers, and the affairs of these are in such shape that their doors will be opened to business in the near future.



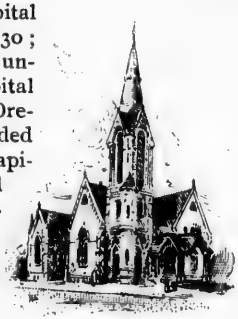
GRACE METHODIST EPISCOPAL CHURCH.

The seven national banks of Portland make the fol-

lowing gratifying showing: First National, capital $500,000, surplus and undivided profits, $824,130; Commercial National, capital $250,000, surplus and undivided profits $166,403; Merchants National, capital $500,000, surplus and undivided profits $55,219; Oregon National, capital $200,000, surplus and undivided profits $41,950; Ainsworth National, capital $100,000, surplus and undivided profits $100,000; United States National, capital $250,000, surplus and undivided profits $27,854; First National of East Portland, capital $100,000, surplus and undivided profits, $45,456. The total resources of these seven national banks are nearly $10,000,000. The other banks of Portland are as follows: Ladd & Tilton, capital $250,000; (the resources of this bank are very large, but the amount of the resources of the bank is not obtainable for publication.) London and San Francisco, Ld., capital and reserve $2,900,000; Bank of British Columbia, capital $3,000,000, reserve $1,300,000, undivided profits $60,000; Portland Savings Bank, capital $260,000, surplus and profits $220,000; Portland Trust Company, capital $350,000; Security Savings and Trust Company, capital $250,000; Hibernian Savings Bank, capital $100,000; Northwest Loan and Trust Company, capital $250,000; Bank of Albina, capital $100,000; Citizens Bank of East Portland, capital $100,000; City Savings Bank, capital $100,000; Commercial and Savings Bank of East Portland, capital $50,000; Albina Savings Bank, capital $50,000.

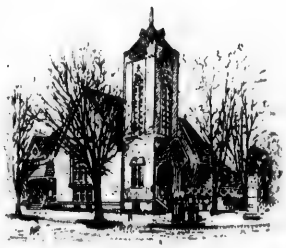


FIRST PRESBYTERIAN CHURCH.

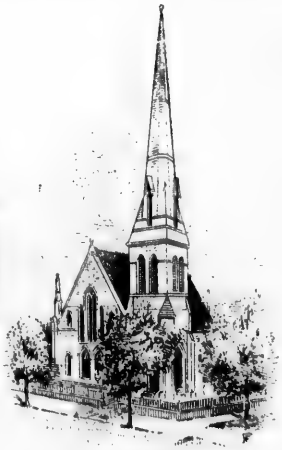


CALVARY PRESBYTERIAN CHURCH.

CALVARY BAPTIST CHURCH.



UNITARIAN CHURCH.



TRINITY (EPISCOPAL) CHURCH.

PORTLAND CHURCHES.

ST. DAVID'S EPISCOPAL CHURCH.

ST. PATRICK'S CHURCH.

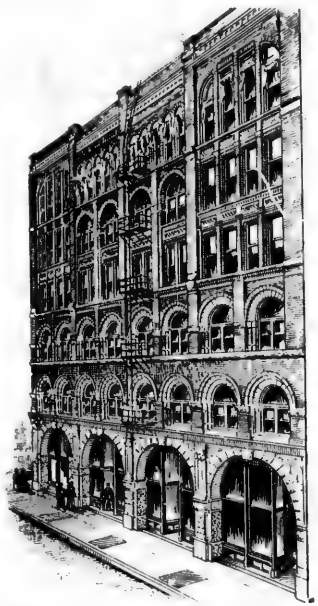
THE SYNAGOGUE.

CHURCH OF THE IMMACULATE HEART.

TAYLOR-STREET METHODIST CHURCH.

PORTLAND CHURCHES.

The American Book Company.—The American Book Company of New York, the largest educational publishing house in the world, has its branch house for the Pacific Coast at 289 Yamhill street. Here are kept in stock all the school and college text books included in its long list of school publications. This list embraces nearly all the school books now in use in the state of Oregon and throughout the Northwest.



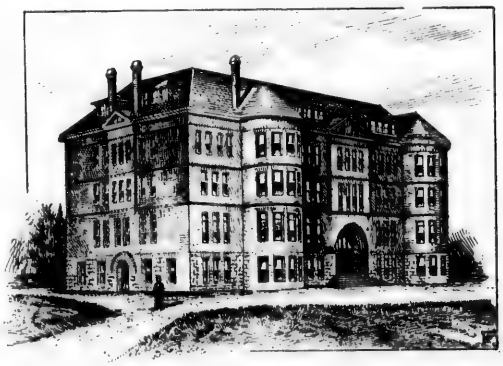
AMERICAN BOOK COMPANY, 289 YAMHILL ST., PORTLAND.

The Portland house was established to serve as a convenient base of supplies for the trade of the Pacific Coast. Hitherto, the great distance of this section of the country from the publishing centers of the East has made it difficult and expensive to properly supply the school patrons. The American Book Company now proposes, so far as possible, to obviate these difficulties by supplying their books freely from the Portland house, allowing dealers a sufficient discount conditional on the books being retailed to consumers atprices which will be satisfactory to the people, and as a result, the Educational Public of this region are as promptly and cheaply supplied with the publications of the American Book Company as any part of the United States.

The Portland University.—The Portland University was organized under the auspices of the Methodist Episcopal Church. The University is under denominational control, as are most of the great schools of the country, but is not in any sense sectarian.

The site of the University is a high plateau between the Columbia and Willamette rivers, three miles northwest and overlooking the city of Portland. The beautiful island in the river, the high range of evergeen hills on the western side, and to the east the lofty peaks of five snow-capped mountains, steamers from local points on the river, and ships from all countries throughout the entire world, passing every few minutes, within a stone's throw of the University buildings, all combine to lend a charm to the scene almost unrivalled.

The attendance has reached the number of 500 in less than three years. In its Literary Department are the College, Preparatory, Normal and Business courses. Schools of Theology, Music, and Fine Arts are also departments of the Portland University.



PORTLAND UNIVERSITY, WEST HALL.

FIRST BAPTIST CHURCH, PORTLAND

A GREAT PLANT.—The Wolff & Zwicker Iron Works and the Wolff, Zwicker & Buehner Pipe Works, at the east approach to the Madison-street bridge, occupy a number of buildings which cover a full block of ground lying along the water front. The most important work handled by the Wolff, Zwicker & Buehner Pipe Works during the past year was the completion of the contract for manufacturing the miles of pipe for the Bull Run water works, which will furnish Portland's supply of water for domestic use.

On taking possession of their new works in the spring of 1893, this company immediately commenced the work of manufacturing the immense pipes or conduits for the Bull Run plant. These pipes are made from heavy steel sheets and in making this pipe it was necessary for the company to avail themselves of the use of the latest improved machinery. The pipes are 35 inches in diameter and are made in lengths of 30 feet each. The successful manufacture of these pipes by a home company was in itself a great triumph for the firm. In addition to the pipe works, the old established firm of Wolff & Zwicker conduct a large foundry and machine establishment in a building adjoining the pipe works. In addition to their East Side plant, in which 25 men are constantly employed, the firm also conduct their old machine shop on the west side of the river, at the corner of Third and Flanders streets, where 45 men find steady work. Taken together, the Wolff & Zwicker Foundry and Machine Shop and the Wolff, Zwicker & Buehner Pipe Works constitute one of the largest plants of the kind on the coast, and they are deserving of the heartiest support of the people of the Pacific Northwest.

GREAT IRON WORKS, WOLFF & ZWICKER, PORTLAND.

No bank of the North Pacific coast enjoys a higher standing than does the First National of Portland. Started some years before 1869, the First National really dates its growth from that year, when Messrs. Henry Failing and H. W. Corbett purchased the controlling influence in the institution. Both Mr. Failing and Mr. Corbett have, since that time, attained great distinction in the Northwest as able financiers and successful business men, and they have repeatedly been honored by their fellow citizens with positions of great trust and responsibility. Mr. Failing served for several terms during the most critical period of Portland's existence as mayor of the city. He has occupied leading positions in other public capacities, and in financial circles of the Northwest he occupies today what may well be termed the position of leader. Mr. Corbett served, with distinction, a term as United States Senator from Oregon. He has long been prominent in public affairs of the state, and he is now one of the heaviest holders of the best business property in Portland.

FIRST NATIONAL BANK, PORTLAND.

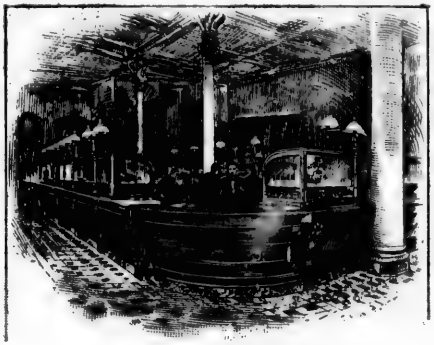
The great personal success of Messrs, Corbett and Failing has redounded directly to the benefit of the First National Bank, over whose destinies they have so long presided.

Immediately after securing control of this bank Mr. Failing was elected its president and Mr. Corbett was made vice-president. They have held these offices uninterruptedly since that time. The capital stock of the bank at the time these gentlemen secured control of its affairs was $100,000. This was immediately increased to $250,000, and subsequently to $500,000. The deposits increased from $48,000 in 1869, to over $4,000,000 in a period of 20 years. The resources of this bank today are very large. It is the United States depository at Portland for the handling of public money, and it is the financial institution which cares for the deposits of many of the largest corporations of the Northwest, as well as for hundreds of the leading business houses of Portland.

In connection with the mention of the First National Bank of Portland in the present instance, some reference to the affairs of this institution during the memorable panic of 1893 will be particularly appropriate. The First National, as one of the oldest and best established banks in Portland, has long had a large list of interior correspondents who placed their dependence for support during periods of financial stringency on the First National here. These banks were large borrowers of the First National, and their own solvency depended largely on the solvency of the leading bank of Portland. It is to the credit of the First National Bank of Portland, that at no time during the panic was one of its interior correspondents pressed for the payment of its obligations by the Portland institution, and the fact that these banks weathered the financial storm successfully is directly due to the financial support that was rendered them by the First National Bank here. The two great banking houses of the Northwest, the First National, and Ladd & Tilton, of Portland, really prevented wide-spread disaster to Oregon and Washington during the panic

which wrecked some of the oldest banking houses in the United States, and it was probably the large resources of these two banks, which has allowed Portland to retain its position as one of the strongest financial centers of the coast.

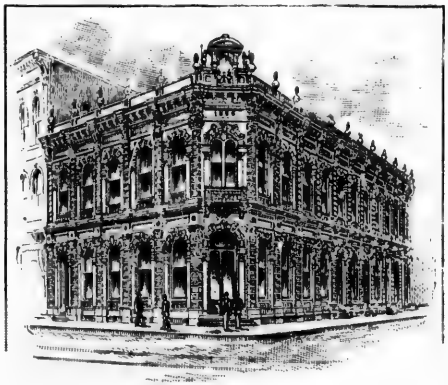
PHOTO. BY TOWNE.



INTERIOR VIEW, FIRST NATIONAL BANK PORTLAND.

The First National now occupies its own building, at the corner of First and Washington streets, Portland. The bank occupies nearly the entire ground floor of the large structure. The quarters occupied by the bank are perfectly appointed and especially adapted to the handling of a large banking business. A feature of the management of this bank is that no one of its officers has ever been allowed to solicit custom for the bank, and its affairs have always been conducted strictly on banking principles. It has been conservative to the point of absolute safety, but it has been liberal enough with its patrons to insure a large support from the best business people of Portland. It has been this liberal spirit to the point of conservatism and safety that has been the keynote to the success of the First National Bank of Portland and the fact that it came out of the panic of 1893 with its resources unimpaired, is ample evidence of the wisdom of the policy so long pursued by the management of this strong financial institution.

No banking house of the coast, stands higher than the bank of Ladd & Tilton, Portland. This strong financial institution is the result of the lifetime's work of the late W. S. Ladd, one of the pioneer citizens of Portland, and the prestige it has gained in financial circles of the West is directly due to the conservative manner in which its affairs have always been managed.

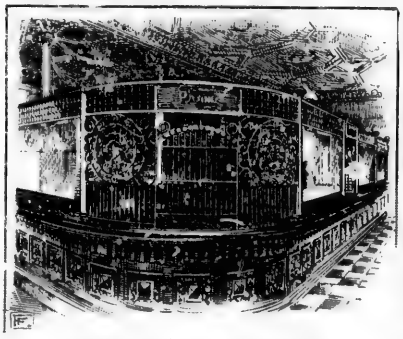


BANK, LADD & TILTON, PORTLAND.

Mr Ladd was one of the four pioneers who reached Portland on the 8th day of April, 1851. At that time he was 25 years of age. For a number of years previous to 1855 Mr. Ladd, in partnership with C. E. Tilton, did an extensive mercantile business under the firm name of Ladd & Tilton. In April, 1859, these gentlemen formed a co-partnership for the purpose of engaging in the banking business. The old firm name of Ladd & Tilton was retained for the new enterprise. The bank at the time it was first started in Portland was capitalized for $50,000. This capital stock was afterwards increased to $250,000. The resources of this single banking house today are no less than $2,000,000.

The partnership between Messrs. Ladd and Tilton was dissolved in 1880. From that time to the date of Mr. Ladd's death in 1893, the bank was conducted by Mr. Ladd, assisted by his eldest son, William, but under the old firm name of Ladd & Tilton. Mr. William M. Ladd, the immediate successor of his father in the management of the large business of the bank, has established a reputation as an able financier by successfully carrying the bank through one of the worst financial panics the country has ever experienced. During the time of the panic not the least distrust was felt by the public in the solvency of the institution and it was not subjected to anything that even bore the semblance of a "run." Ladd & Tilton, with the First National Bank of Portland, enjoy the distinction of having been the bulwarks of the financial strength of the Northwest during the panic of 1893, and that this panic did not cause wide-spread disaster among the banks of Oregon and Washington during what will long be regarded as a memorable year, was directly due to the aid rendered the interior banks during that time by Ladd & Tilton and the First National Bank of Portland.

PHOTO. BY TOWNE.

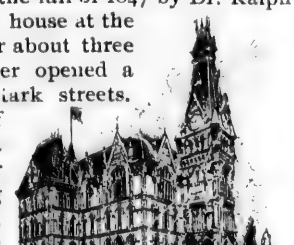


INTERIOR, BANK, LADD & TILTON, PORTLAND.

Mr. William M. Ladd is assisted in the management of the great banking house his father established in Portland, by his brother, Mr. Chas. E. Ladd. These gentlemen are pursuing the same conservative policy in conducting the bank so long followed by their father before them, and at no time in its history has it enjoyed a greater degree of public confidence than it does at the present time.

The assessed valuation of property in Multnomah county is, in round numbers, $65,000,000. This does not include several millions of dollars worth of church and school property which is exempt from taxation.

The first public school in Portland was opened in the fall of 1847 by Dr. Ralph Wilcox. It was conducted in a low, rudely constructed house at the foot of Taylor street. This school was conducted for about three months. In the following February, Miss Julia Carter opened a school in a log cabin at the corner of Second and Stark streets. Thirty-five pupils attended this school. In the winter of 1848-49, the only public hall in the village was a rather dilapidated and shaky structure which, at a prior time, had been used as a barrel factory. This building was known as the "cooper shop." In November, 1848, Aaron J. Hyde, a veteran of the Mexican war, opened a school in this building. The lot on which the structure stood is now on First street, between Morrison and Yamhill. This lot was purchased by one of the early settlers of Portland for the consideration of "two bull pups." This old house, used during the years 1847-48-49, as a Christian sanctuary and school, had, by 1857, degenerated into the ignoble use of a Chinese wash-house. To Rev.

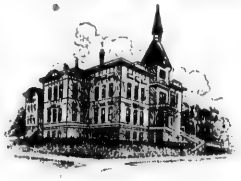


HIGH SCHOOL, PORTLAND.

George B. Atkinson is due the honor of having inaugurated the movement that resulted in the establishment of free schools in Portland. Through the efforts of this gentleman, and upon the recommendation of Governor Joseph Lane, the first territorial legislature of Oregon passed a school bill which became a law, September 5, 1849. It was not, however, until 1851 that steps were taken by the citizens of Portland to organize a school district here. In the meantime, several private schools had been opened in Portland. These schools were opened by the following gentlemen on the dates named: Horace Lyman, December, 1849; Col. Cyrus A. Reed, April, 1850; De Los Jefferson, August, 1850; Rev. N. Doane, December, 1850. In THE OREGONIAN of December 6, 1851, a school board consisting of Anthony L. Davis, Alonzo Leland and Reuben P. Boise advertised the opening of a free school here, with John T. Outhouse as its teacher. This, the first free school of Portland, opened its doors with an attendance of about 25 pupils. When not engaged in his school work, Mr. Outhouse laid cross-walks and helped to unload vessels.

HARRISON SCHOOL, PORTLAND.

In November, 1852, the citizens of Portland voted $1,600 to support a free school. About that time the public school was moved to the corner of First and Taylor streets. Owing to the increasing attendance, Mr. Outhouse was supplied with an assistant teacher in the person of Miss Abigail M. Clark. The school at once assumed the distinction of a "graded school." It was "graded" because the building which it occupied was two stories in height. In order to properly accommodate the scholars who crowded the school, the stairway was utilized for seats, the children being seated or "graded" up the stairs as far as possible. The law regulations of these pioneer schools allowed pupils to deport themselves about as their inclinations dictated. In addition to being an accomplished teacher, Mr. Outhouse soon learned that the duties of his position demanded the exercise of great muscular powers. With him, it was either a question of subduing the school by brute force or of being soundly thrashed by the tender youths he was endeavoring to guide into the right channel of thought. It is reported that Mr. Outhouse managed the school successfully, and some of the later successful men of Portland enjoyed the distinction of having received their first instruction in the primitive school presided over by this gentleman.



FAILING SCHOOL, PORTLAND.

PARK SCHOOL PORTLAND.

Among the legendary lore and historical incidents connected with the early settlement of Portland, the following, bearing on the early life of Oregon's present governor, will bear relating:

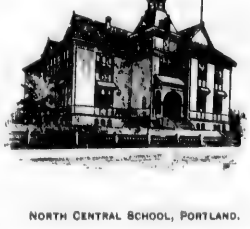
In July, 1855, the Portland school board advertised in THE OREGONIAN for a competent person to take charge of the public school of district No. 1. This advertisement was answered by Sylvester Pennoyer, a hesitating young man who had lately come from New York to the Puget Sound country to practice law. Becoming

discouraged with a law practice that was not as profitable as the sawmill business subsequently proved to be, young Pennoyer had sold his library and was preparing to start on his return journey East to seek relief from homesickness under the parental roof, when he noticed the advertisement for a school teacher in Portland. When the young man applied for the position his modest demeanor, with his intellectual cast of countenance and his vast fund of information on "How to be a successful Populist of the future," attracted the favorable notice of the board. He was at once engaged to preside over the village school at a salary of $125 a month, and he was told to report to the county school superintendent for examination. With high hopes of meeting some luminary in standing collar, polished cuffs and shining boots, Pennoyer wound his hesitating way to the great official's quarters. What was the teacher's surprise and dismay to find the superintendent industriously cleansing his own and his family's soiled linen in a wash tub. Holding a bar of soap in one hand and a book in the other, the superintendent examined Pennoyer on the correct principles of teaching, in which the subject of washing clothes was carefully avoided. Pennoyer passed the examination successfully, but his experience with the superintendent at the wash tub destroyed the great respect, which he had formerly felt for high official position, and it is reported at the time, that Pennoyer made a firm resolve that the only man in the future who should receive gracious treatment at his hands was the plain individual in homespun clothes whose vote he was after, the president of the United States, vice-president Stevenson or secretary Gresham not excepted, and, further, that he would return thanks to God in his own way, and on the day of his own choice, free from presidential interference.

CLINTON KELLY SCHOOL, PORTLAND, OLD DISTRICT NO. 2.

STEPHEN'S SCHOOL, PORTLAND.

The first school building owned by the city of Portland was that occupied by the Central school, which was opened May 17, 1858. From this humble beginning has grown the present admirable public school system of Portland. The old log cabin school-house and the dingy cooper shop withstood the ravages of time for a short period only after they were utilized for educational purposes, and they were finally torn down and substantial buildings of brick and stone were erected in their place. Scattered over the city of Portland there are now 32 public schools, many of which are monuments of architectural art. From the stately High school, with its 21 commodious class rooms and large assembly hall, seating 1,200, down to the unpretentious four-room school of the outlying suburb, the schools of Portland are under the supervision of accomplished teachers, carefully selected for their proficiency in educational work. Through the conscientious efforts of these teachers and the liberal support given by the citizens of the city the public schools of Portland have

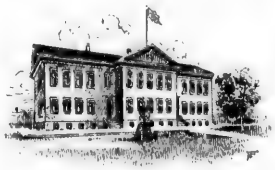


NORTH CENTRAL SCHOOL, PORTLAND.

attained a high standard of excellence. There were 8,478 pupils in actual attendance at the public schools in Portland in November, 1893. These pupils were taught by 220 teachers, among whom are special teachers of penmanship and drawing. The number of pupils in attendance at these schools in November of last year was as follows: High school, 475; Harrison, 812; Atkinson, 633; Park, 551; Couch, 710; Ainsworth, 55; Failing, 680; Stephens, 437; Willamette, 29; Holladay, 420; Williams Avenue, 446; Fulton, 47; Fulton Park, 40; Central, 388; North Central, 404; Sunnyside, 271; Brooklyn, 213; Albina Central, 216; Chapman, 167; Multnomah, 180; Woodlawn, 177; Peninsula, 64; St. Johns, 53; Portsmouth, 114; Albina Homestead, 145; Clinton Kelly, 158; Sellwood, 169; High school (night school), 75; Albina night school, 50; Midway, 17; Marquam, 14; Fernwood, 18; Lownsdale, 225.

WILLIAMS AVENUE SCHOOL, PORTLAND.

The estimated value of the school property owned by the city of Portland, with the realty and improvements segregated, is as follows: High school grounds, $100,000, building, $148,000; Harrison, grounds, $45,000, building, $47,000; Failing, grounds, $30,000, building, $47,000; Atkinson, grounds, $50,000, building, $54,000; Park, grounds, $50,000, building, $32,000; Couch, grounds, $35,000, building, $47,000; Chapman, grounds, $13,000, building, $10,000; Watson, grounds, $3,000, building, $10,000; Ainsworth, grounds, $14,000 (building destroyed by fire); Fulton, grounds, $4,000, building, $1,000; Williams Avenue, grounds, $32,000, building, $20,000; Central Albina, grounds, $3,000, building, $3,000; Multnomah, grounds, $5,000, building, $6,000; Albina Homestead, grounds, $6,000, building, $6,500; Holladay, grounds, $16,000, building, $12,000; West Central, grounds, $20,000, building, $17,000; Central, grounds, $50,000, building, $20,000; Stephens, grounds, $25,000, building, $20,000; Clinton Kelly, grounds, $5,000, building, $16,000; Sellwood, grounds, $1,000, building, $5,000; Midway, grounds, $1,000, building, $1,000; Marquam, grounds, $1,000, building, $1,000; Brooklyn, grounds, $6,000, building, $12,000; Sunnyside, grounds, $4,800, building, $12,000; Peninsula, grounds, $1,000, building, $4,000; Woodlawn, grounds, $1,200, building, $3,000.



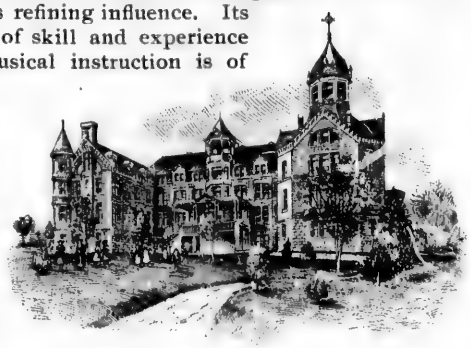
CENTRAL SCHOOL, PORTLAND.

In addition to the above property, which is occupied, the city owns a tract of land in Stephens' Addition valued at $25,000, and a lot and building in Tibbett's Addition, known as Lee chapel, worth about $1,400. The total value of all this school property, including furniture worth $50,000, is $1,157,900. This sum is made up as follows: realty, $553,400; improvements (the first cost in excess of this), $554,500. The cost of conducting the schools of Portland, for the fiscal year 1892-93, was $251,110. The estimated cost of conducting these schools for the fiscal year of 1893-94, is $335,800. The cost per pupil, in 1893, was $26.98.

In addition to the excellent public schools, Portland is the seat of many well-conducted private seats of learning. Among these are the law and medical schools of the University of Oregon, the medical department and college of pharmacy of the Willamette University, the Portland University, St. Helen's Hall, a school for girls, Bishop Scott Academy, a school for boys, two fine Catholic schools, and a number of boarding schools and academies. As educational factors, the six libraries of

the city are closely allied to the schools. The Portland Library Association has a collection of 19,000 carefully selected books. This library occupies a massive building erected for its exclusive use, in 1893, at a cost of $100,000.

St. Helen's Hall, the popular, well-known school is located on Park avenue and St. Clair streets. It is a boarding and day school for girls. The school was founded in 1869, by Right Rev. B. Wistar Morris, D. D. From the first the school has stood on its own merits, and it has always enjoyed a wide reputation for the thoroughness of its instruction and for its refining influence. Its curriculum is most liberal. Teachers of skill and experience fill the various departments. The musical instruction is of the highest order, and the art department also offers great advantages. Special attention is given to morals, manners, and the use of good English.



ST. HELENS HALL, PORTLAND.

The building occupied by the school is a noble one. It is built of brick and stone. It is heated, drained and ventilated after scientific methods, and occupying an elevated site, it commands a view of unsurpassed beauty. The Misses Rodney have had the management of the school from its beginning. Applications for information regarding St. Helen's Hall may be addressed to them.

Portland is well protected from fire by a splendidly equipped fire department. No great conflagration has devastated the city for 20 years past. The annual losses by fire here are small when compared with those of other cities of the same size. In the early days of Portland's history well trained volunteer fire companies vied with each other in putting out fires and in making social conquests. These companies and the dates of their organization, are as follows: Willamette Engine Company, 1853; Multnomah Engine Company, 1856; Columbia Engine Company, 1859; Protective Engine Company, 1862; Vigilance Hook & Ladder Company. As the city grew larger the necessity of a regular paid department was felt. This was accomplished in 1882. With improved apparatus and enforced discipline, the department has attained its present high standard of efficiency. There are now 178 men connected with the fire department of Portland. These men are under the supervision of a chief and three assistants. The apparatus consists of eight steam engines, five hook and ladders, four hose wagons and two chemical engines. The department, with its engines and apparatus, occupies 15 houses. The cost of maintaining the department, in 1893, was, approximately, $152,628.

Owing to its peculiar position as the terminus of three transcontinental lines of railroad, and as a port at which numerous vessels arrive daily, Portland, at all times, has a large floating population. Among the people who arrive in the city are representatives of the most vicious elements of society, who prey on the unsophisticated, as they do in all large cities. To protect the man not accustomed to city ways from the wiles of the confidence man and to rid the city of all objectionable or suspicious characters, requires the services of a well disciplined police force. The first regular police department was inaugurated in Portland in 1872. At first consisting of a mar-

shal and but few patrolmen. It grew in subsequent years to its present importance. It was during the past year, however, that the department was brought to its present high standard of efficiency. Under the skillful supervision of a chief experienced in all matters pertaining to the management of a police department, many reforms have recently been made in the management of the department. By the adoption of horse patrols, police protection is now afforded a large part of the outskirts of the city that were formerly without police officers. In the summer months crime in Portland is reduced to a minimum, and but little trouble is experienced by the police in keeping themselves informed of the movements of the vicious classes here. In the winter, however, men flock here from all sections of the country, and it requires the utmost vigilance on the part of the police to prevent depredations on property. It has been found necessary to reduce the force and husband the police appropriation during the summer months in order to give the city the required police protection during the winter. The police force of the city, as it is now organized, consists of a chief, four captains, two clerks, one captain as tax collector, two patrol drivers, one guard, and 74 patrolmen. The police appropriation, for 1893, was $118,000, which, by economical administration, was just sufficient to pay the expenses of the department during the year.

ATKINSON SCHOOL, PORTLAND.

Even if a city is favored by nature with climatic conditions favorable to the prolongation of life and the maintenance of health of its population, it will yet be an undesirable and unhealthful place of residence unless stringent sanitary measures are adopted, covering sewerage, disposal of garbage, and street cleaning. Combined with its exceptional climate, Portland now has a complete and costly system of sewers. The sewerage system of the city includes 62 miles of sewer mains and canals. The largest sewer in the city—the largest even on the Pacific coast—was completed here in November of last year at a cost of $117,000. This sewer is 2¼ miles in length, and has a diameter varying from 34 inches up to the enormous size of 7 feet in the clear. This sewerage system covers both sides of the river.

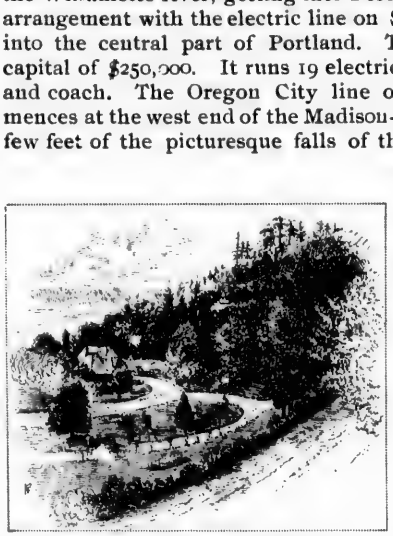
Portland's pride is the excellent rapid-transit system covering all parts of the city and the adjacent suburbs. A network of electric lines converging in the business center, spreads out through the city and reaches points as far distant as 15 miles. The equal distribution of these lines could not have been better planned, for there is not today a suburb or part of Portland that is without street-car connection with the city's business center. There are now 98 miles of street railways in Portland and its suburbs. This system is operated by seven companies.

AN ELECTRIC STREET CAR, PORTLAND.

The most important inter-municipal railway system of Portland is that operated by the City & Suburban Railway Company. This company has a capital stock of $1,000,000. It operates 53 miles of electric road. Starting from the corner of Third and Yamhill streets, in the center of the city, 11 different points can be reached by the cars of this system. Woodstock, Waverly, Richmond, Mt. Tabor, Mt. Tabor Villa and intermediate points, are reached by the lines of this company crossing the

Willamette river via the Morrison-street bridge. Upper and Lower Albina, Irvington, Holladay's Addition, and St. Johns are reached by the lines of the company crossing the Willamette river over the steel railroad bridge. On the west side of the river the lines of the City & Suburban Railway Company reach to all parts of the city. The lines of this company are operated principally by electricity, with connections for Mt. Tabor and St. Johns by steam motor.

The East Side Railway Company operates 22 miles of railway on the east side of the Willamette river, getting into Portland over the Madison-street bridge. Through arrangement with the electric line on Second street, this company now runs its cars into the central part of Portland. The company was incorporated in 1892, with a capital of $250,000. It runs 19 electric-motor cars, four trailers and one steam-motor and coach. The Oregon City line of this company is 15 miles in length. It commences at the west end of the Madison-street bridge and ends at Oregon City, within a few feet of the picturesque falls of the Willamette river. Along this line are many charming bits of scenery. The road winds in and out of great prune and apple orchards, and it runs through the suburban points of Brooklyn, Sellwood, Milwaukie and Gladstone. From Gladstone a branch, one-half mile in length, runs to the beautiful tract of land called Gladstone Park.



ENTRANCE, RIVERVIEW CEMETERY, PORTLAND.

Another line operated by the East Side Railway Company, extends to Mt. Tabor, a solitary and picturesque butte 3½ miles east of the river. The summit of this butte attains an elevation of about 700 feet. Clustered around this hill are numerous gardens, cottages and elegant residences. At Mt. Tabor the electric line connects with a steam-motor line, 3½ miles in length, running to Mt. Scott.

The Portland Consolidated Railway Company has a capital of $1,000,000. It operates 32 miles of electric railway and owns 79 finely finished cars. The Second-street line, operated by this company, is 6½ miles in length. It runs to the southern suburb of the city, terminating at Riverview cemetery, one of the finest burying grounds in the United States. The Washington-street line of this company passes the City park, from which it runs due north, finally climbing Willamette Heights, from which a beautiful view of the city and its surroundings is obtained. Branch lines leave the Washington-street line at Thirteenth and Sixteenth streets. On the east side of the river this company operates a line to Vancouver, seven miles in length. This road was formerly operated as a steam-motor line, but it was electrified on June 23d last. The road reaches to the south bank of the Columbia river, opposite Vancouver. Here connection is made for Vancouver by a steam ferry. In Vancouver, which is really a suburb of Portland, the company operates lines of road running to Fort Vancouver and to the driving park on Vancouver Heights. Before the Columbia river is reached the electric line passes through several of Portland's most attractive suburbs. The principal of these suburbs are Highland, Cloverdale,

Piedmont and Woodlawn. From Cloverdale a track branches off from the main line running through Highland and Irvington Park.

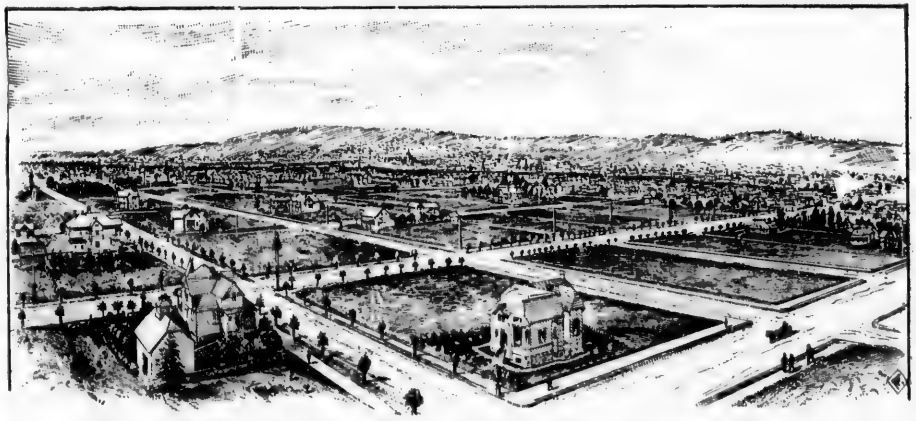
The Barnes Heights and Cornell Mountain Railway is three miles in length. It is an electric line, and runs from the head of Washington street to Mountain Park, a suburb located on the high lands back of the city. It is the intention of the owners of this road to extend it to Hillsboro, 18 miles distant from Portland, in the near future.

The City & West Portland Park Motor Company was incorporated in April, 1889, with a capital of $100,000. This company operates a motor line seven miles in length, running from Hamilton street, in South Portland, through the attractive additions of Bertha, Hillsdale and South Portland Park, to the beautiful tract of land known as West Portland Park. This lies on the uplands back of Oswego. This line is equipped with two steam-motors, two coaches and 11 freight cars. The total cost of construction and equipping this road was $150,000.

The Portland Cable Railway Company operates seven miles of cable road. The main line extends from the Union passenger depot, at the foot of Fifth street, to a high elevation in the southern part of the city known as Portland Heights. From Fourteenth street a track branches off running to the City park and the baseball grounds. A short spur also runs down Alder street to Front, connecting with the main line at Fifth.

HOLLADAY'S ADDITION.—Perhaps the most favored location by nature for the erection of fine residences in Portland is in what is known as Holladay's Addition. The tract of land thus designated embraces about 400 acres, which lies on the east

PHOTO BY TOWNE.



HOLLADAY'S ADDITION, PORTLAND, LOOKING SOUTHWEST FROM WATER TOWER.

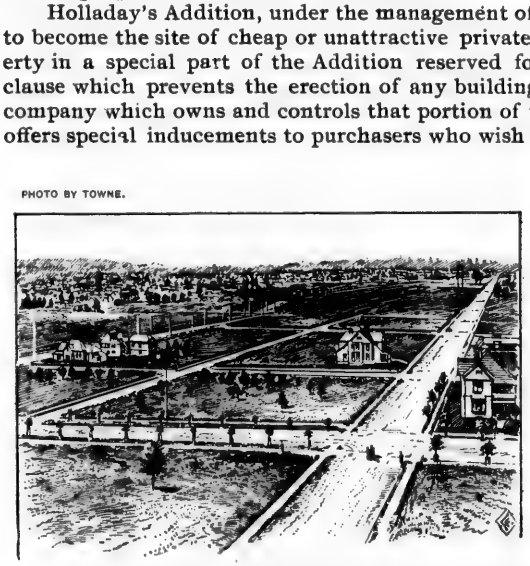
side of the Willamette river, opposite the best business part of the city. It is within easy reach of all parts of Portland by means of the principal lines of electric railways, and direct access to the west side of the river is had over the Railroad, Burnside, Morrison and Madison-street bridges. The property is all high and sightly, the slope back from the river being a gradual and easy rise, and all parts of the Addi-

tion command the best views of Portland and the surrounding country of any district in the city. That portion of this desirable property which lies nearest to the water front will become valuable for business purposes.

The owners of this property have inaugurated a system of improvements which, with a wise policy in handling the property, has made this the most desirable residence portion of the city. These improvements consist of street work, including grading, sewerage and paving, the laying of sidewalks, and supplying lights and water. The residents of this part of Portland enjoy all the conveniences afforded any of the best residence centers of the large cities of the continent, and many of the best known people of Portland have homes here.

Holladay's Addition, under the management of its owners, has not been allowed to become the site of cheap or unattractive private dwellings. All deeds to property in a special part of the Addition reserved for residences contain a building clause which prevents the erection of any building except private dwellings. The company which owns and controls that portion of the property which is still unsold offers special inducements to purchasers who wish to build homes. In the reserve district referred to above, in order to insure the erection of the finest class of residences, the company offers a rebate on the purchase price to those who will build good houses. The result has been to make Holladay's Addition the site of handsome residences, some of them palatial in size and appointments, and all of these houses are surrounded by well-kept lawns and flower beds. This part of Portland may be truly said to be the home of the wealthy, the cultivated, and the better classes of Portland's people. While the prices of property in the Addition, considering the advantages of proximity to the business district, means of rapid transit, location, etc., are not high, the figures which the owners early placed on the lots were large enough to insure the building of homes here only of the better classes. The erection of the many fine homes which the Addition now contains has resulted in a regular appreciation of values here, and there is an absolute assurance that property will make the same rapid rise in value in the future that it has in the past.

PHOTO BY TOWNE.



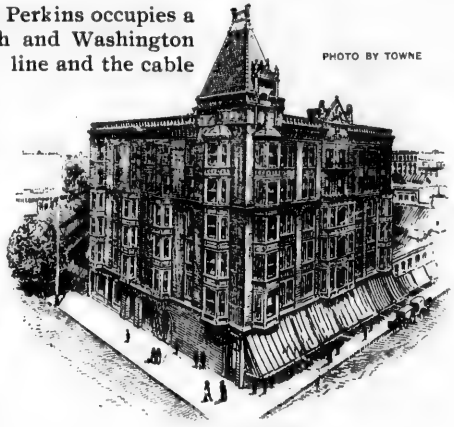
PART OF HOLLADAY'S ADDITION, LOOKING SOUTHEAST FROM WATER TOWER

As before stated, Holladay's Addition affords every advantage to those who desire a good home among attractive surroundings and in a good neighborhood. The Addition is well lighted by gas and electricity; under the city water system an ample supply of pure water is supplied for domestic and other purposes, and an efficient system of sewerage has been constructed. The location of Holladay's Addition alone is sufficient to cause the property to rise steadily in value in the future. With the solid business district of the city just across the river, barely half a mile distant to the west, with the great railroad shops and thickly settled part of Portland known

as Albina touching the addition on the north, and with the old-established business and residence sections included in the former municipal limits of East Portland on the south, it is patent that this property must partake of all the advancement which is made in Portland as a whole.

Holladay's Addition property is sold by the owners, the Oregon Real Estate Company, which has offices at No. 203 Morrison street, Portland. The company's offices are open at all times for the reception of the general public. Those desiring information about the Addition, and in regard to terms, prices, etc., can, by inquiry by mail or otherwise of the Oregon Real Estate Company, No. 203 Morrison street, Portland, Oregon, receive a prompt answer, and a fine birdseye view of Holladay's Addition and the city of Portland.

THE HOTEL PERKINS.—The Hotel Perkins occupies a central position, on the corner of Fifth and Washington streets. The Washington-street electric line and the cable line pass the door. These lines afford easy means of reaching any part of Portland, and the cable line connects direct with the Union depot. The Hotel Perkins is now under the proprietorship of R. S. Perkins. Large, well lighted and perfectly heated and ventilated rooms have established an enviable reputation for the Perkins with the traveling public. The Perkins receives extensive patronage from the stockmen, and the names of the leading stockraisers of Oregon, Washington and Idaho, who visit Portland, are usually found on the hotel register. A well conducted restaurant and a bar stocked with the finest liquors are features of this well conducted house.



HOTEL PERKINS, PORTLAND.

THE PERKINS RESTAURANT.—The veteran Portland restaurateur, Mr. D. H. Simmons, whose skill as a caterer is appreciated by epicures, conducts the Perkins restaurant. He numbers among his patrons many Portland business men who have dined with him for years. Meals are served at all hours at the Perkins restaurant, for from 25 cents up.

THE HOLTON HOUSE, PORTLAND.

THE HOLTON HOUSE.—The popular Portland hostelry so long known as The Holton House is located on the corner of Fourth and Alder streets, and is the point of departure and arrival of trains on the West Side Division of the Southern Pacific. The present proprietors of this well conducted house are Messrs. J. R. Markley, R. R. Hays and M. D. Roche, the latter gentleman being the acting manager. All of these gentlemen are well known to the traveling public of the coast, and they have hosts of friends among the large number of people they have so long helped to entertain.

The Holton House occupies a substantial brick structure and contains 75 rooms, all of which have recently been newly and handsomely furnished. All modern improvements are found here for the comfort of guests. Traveling men have always received special attention at the Holton, and the large patronage they have always accorded the house attests their hearty appreciation of its merits. During the political campaigns, the Holton is the headquarters for the leading politicians of all parties. An elegant bar and billiard room, as well as a perfectly arranged barber shop, are connected with the house for the accommodation of guests.

PHOTO. BY TOWNE

NEW GRAND CENTRAL HOTEL, PORTLAND.

THE NEW GRAND CENTRAL.—This hotel occupies the handsome five-story pressed-brick and stone building located on the corner of Third and Flanders streets. It was erected by Henry Weinhard in 1892, at a cost of $105,000. The furnishings of the house cost an additional $20,000. It is convenient to the Union depot and all the steamboat docks of the city and is on the direct line of the City & Suburban electric railways.

The New Grand Central contains 142 handsomely furnished rooms, a well furnished office, an attractive dining room, bar and barber shop, electric lights and elevator. Artesian water and steam heat are supplied throughout the house. Under the management of those popular and well-known caterers, Messrs. Edwards, Weiner & Clark, formerly of the Quimby House, the New Grand Central is enjoying a large local patronage, and it is justly popular with the traveling public from all parts of the world. It is the only first-class house west of Chicago conducted at popular rates of from $1 to $2 a day.

"THE CURTIS."—No private boarding house in Portland occupies a higher place in public esteem than "The Curtis," located on the corner of Twelfth and Morrison streets. "The Curtis" has all the external appearance of a handsome private residence, but its facilities for the accommodation of guests are equal to any of the leading hotels. So great a popularity does "The Curtis" enjoy that during 1893 it was found necessary to add an extensive wing to the main building to accommodate the patrons of the house. No expense is spared by Mrs. Curtis in engaging skillful cooks and trained house servants. The table of "The Curtis" is noted for its menus and the service of the entire house is unsurpassed. All the comforts of home can be found in the handsome suites of this well conducted family house.

PHOTO. BY TOWNE.

"THE CURTIS," PORTLAND.

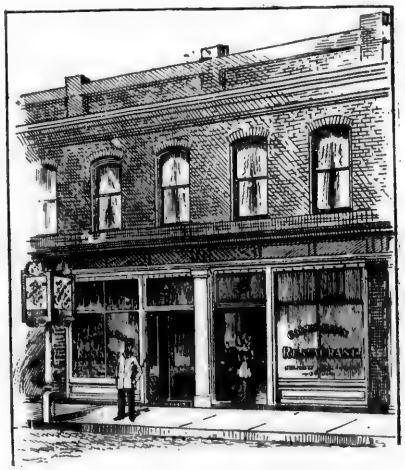
"THE COLONIAL."—This handsome private boarding house is located at 165 Tenth street, between Morrison and Yamhill. The building occupied by "The Colonial" was erected by Hon. H. W. Corbett for Mrs. Wisner, the present proprietress. Under her management the house has attained a reputation as a home for families desirous of escaping the worries of housekeeping, and who want more privacy than is afforded in hotel life.

PHOTO. BY TOWNE.

"THE COLONIAL," PORTLAND.

"The Colonial" is centrally located in the most attractive part of Portland. Its handsome apartments, both single and en suite, contain all modern appointments, and the house is elegantly furnished throughout. Mrs. Wisner takes a special pride in her table. She employs the best cooks and keeps her table service up to the highest standard of excellence. A few apartments are reserved at "The Colonial" for the accommodation of tourists visiting Portland, who will find here one of the best conducted family houses on the coast.

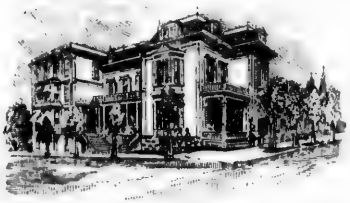
THE COSMOPOLITAN.—Well appointed restaurants where choice viands are served, play an important part in metropolitan existence. The Cosmopolitan restaurant at 270½ and 272 Stark street, opposite the Chamber of Commerce building, stands high among the restaurants of Portland. All the delicacies of the market are included in the menu of the Cosmopolitan. These are rendered appetizing by the exercise of the highest culinary skill and served to patrons on short notice. A fine merchant's lunch is served at the Cosmopolitan during the noon hours for 25 cents, and a choice French dinner with wine and cognac is served daily, between 4 and 8 P. M., for 50 cents. Monsieur George E. Combe, a distinguished *chef de cuisine*, presides over the kitchen and attends to the catering department, while Monsieur J. M. Gorlier looks after the dining rooms and sees that the patrons receive prompt and careful attention.



COSMOPOLITAN RESTAURANT, PORTLAND.

"THE HESPERIAN."—"The Hesperian," located at No. 533 Morrison street, corner of Seventeenth, conducted by Mrs. L. E. Slatten, is classed among the "exclusive" boarding houses of the city. It occupies an eminence overlooking the city within easy communicating distance of all parts of Portland which are reached by the electric and cable-car lines. "The Hesperian" affords a healthful and conveniently located home for its guests. Patrons of this house are loud in their praises of Mrs. Slatten, who spares no effort to cater to their every want. The culinary department of "The Hesperian" is carefully looked after and the table is supplied with all the delicacies of the changing seasons. A comfortable and elegant home without housekeeping worries, is what the guests of "The Hesperian" enjoy at all times.

PHOTO. BY TOWNE.



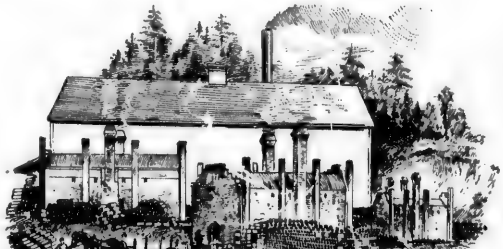
"THE HESPERIAN," PORTLAND.

HOTEL ZUR RHEINPFALZ.—This popular four-story brick family hotel is under the management of John Matthiesen. It is located at the corner of Front and Madison streets. The hotel contains 115 rooms, well furnished for family or transient trade. While the service at this popular house is good, the rates are on a most reasonable basis. Permanent guests are charged but $4.50 a week, while the transient rates are 80 cents a day. Mr. Matthiesen is very popular with the German population and his house is considered the leading Deutches Gasthaus of the city and receives the patronage of most of the Germans who visit Portland.

PHOTO BY TOWNE.

HOTEL ZUR RHEINPFALZ, PORTLAND.

The Zur Rheinpfalz is the headquarters of the Bakers' Union, an important trade organization. Clean rooms and an excellent family table are the features of the Zur Rheinpfalz.



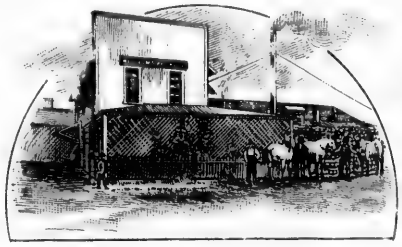
PORTLAND CLAY CO'S WORKS, FULTON PARK

THE PORTLAND CLAY COMPANY.—The Portland Clay Company was incorporated in 1892, with E. B. McFarland as president; F. L. Litherland, vice-president and manager; O. F. Paxton, secretary and J. L. Hartman, treasurer. The yard and plant of the company are located at Fulton Park, a suburb of Portland. The excellent quality of clay found here furnishes the best material for making paving brick and fire-proofing manufactured.

The paving bricks of this company have a resisting strength of 140,000 pounds to the brick. They were ordered by the Oregon City council for paving the streets of that city. The fire-brick and fire-proofing made by the Portland Clay Company were used in constructing the Chamber of Commerce, the Wells-Steinbach and the Dekum buildings, of Portland. The resisting power of the hollow tile fire-proofing used in the Chamber of Commerce building, and made by this company, is 800 pounds to the square foot, in seven inch tiles with seven feet span.

THE MULTNOMAH BOX COMPANY.—The Multnomah Box Company was established in Portland by S. E. Wrenn in 1885, and incorporated as a stock company in 1890, with S. E. Wrenn as president and manager. The company's factory is located at the foot of Harrison street. This company manufactures a high grade of trunks and all varieties of packing boxes, from the lightest fruit box to the heaviest dry goods case. These are made principally from Oregon spruce lumber. Shipments are made by the company to all parts of the coast, including California, Alaska and points east of the Cascades in Oregon, Washington and Idaho. The output of the company is constantly increasing. This is due to the high reputation which the output of the company justly enjoys with the trade and the liberal methods which the management has always pursued in pushing its business.

MULTNOMAH BOX FACTORY, PORTLAND.



WILHELM'S BREWERY, SELLWOOD.

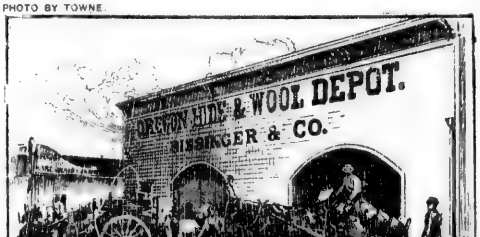
SELLWOOD BREWERY.—The Sellwood Brewery was built by the present proprietor, John G. Wilhelm, in 1889. Although small, the brewing plant is a complete one, and is supplied with the most modern machinery.

The ice plant used was manufactured by the Oakland Iron Works, of California. Mr. Wilhelm manufactures sufficient ice here not only to meet his own demands, but also to supply the saloons of Sellwood and a considerable family trade. The capacity of the brewing plant is eight barrels of beer and porter a day. The water used in the brewery is taken from an artesian well on the premises. This well is 200 feet deep, and the water is drawn from it by one of the celebrated Cook deep-well pumps. The cellar under the brewery is 25 x 50 feet in size, and is well supplied with storage vats.

The popularity of the "Half-and-Half" made here has reached Portland, and this product has attained such a reputation that Mr. Wilhelm has opened a Portland depot at the Madison-street Exchange, No. 252 First street, where orders are taken. A large wagon is now regularly employed by Mr. Wilhelm in delivering his beer to all parts of consolidated Portland.

FULTON TANNERY.—The Fulton Tannery conducted by Weber Brothers is located on the bank of the Willamette river in that part of consolidated Portland known as Fulton Park. The capital invested in the plant amounts to $20,000. Hides are shipped to the Weber Brothers to the extent of 125 a week from all parts of Oregon and Washington, and the calf skins and kip skins received at the tannery average 200 a month. These are tanned and turned into the finest harness and saddle leather as fast as they are received, and shipped to points as far east as St. Paul, Minnesota, and Bozeman, Montana. The oak and hemlock bark used in tanning cost the tannery $4,000 a year. The machinery of the plant is of the best makes. The average annual business of the tannery amounts to $25,000.

PHOTO BY TOWNE.



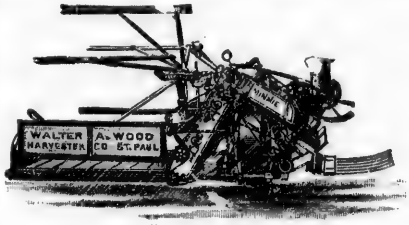
HEADQUARTERS, BISSINGER & CO., PORTLAND.

BISSINGER & CO.—The representative Pacific coast hide and wool establishment of Messrs. Bissinger & Co., of Portland, is the outgrowth of the pioneer house of Lewis, Sloss & Co., which was established in this city in 1865. This latter house also had large interests in the Alaska Commercial Company in addition to their heavy business at Portland. Lewis, Sloss & Co. retired from the hide branch of their business in 1881, and the present house of Bissinger & Co. was established by two of the employes of the old firm, Messrs. A. Bissinger and Max Heilbrunner. The latter gentleman still holds the important position of secretary of the Alaska Commercial Company.

Bissinger & Co. make their present headquarters in San Francisco, with an important agency at Portland. The firm conducts other branch houses at The Dalles, Spokane, Seattle, Victoria, B. C., and Salt Lake City. Their Portland branch is located at the Pacific dock on Front street. Hides, wool, furs and leathers are the products handled by the firm. They operate a sheep-skin tannery at Portland and an upper-leather tannery at San Francisco. They handle, at the present time, two-thirds of all the hides and pelts produced by the two states of Oregon and Washington, and they ship these products to all parts of the world. The firm is largely interested in the Union Meat Company, of Portland, and the Pacific Meat Company, of Tacoma and Seattle. The present firm of Bissinger & Co. is composed of A. Bissinger, Max Heilbrunner, I. Bissinger, S. Bissinger and J. Heilbrunner.

WALTER A. WOOD HARVESTER CO. This company is the outcome of the old Minneapolis Harvester Works, with a complete new manufacturing plant, with greatly increased facilities, and named after one of the most distinguished of America's inventors. The Walter A. Wood Harvester Co. is now in a position to fill its immense orders for harvesting implements from all parts of America. The new company manufacture all the machines as made by the original Hoosick Falls Company, and in addition the celebrated Minneapolis binder. The "Minnie" has been taken up on account of its special suitability as a binder for Western use. While certain manufacturers have been making their binders smaller each successive season,

until the machines have been brought into too contracted a condition for the broad-gauge style of Western farming, the generous proportions of the "Minnie" have been kept intact. It retains the big wheels, big reel, big rollers, big gear, big elevator, trussed main frame and strong self-relieving packers. Farmers, especially throughout Oregon, Washington, California and Idaho, appreciate the merits of the "Minnie," and recognize its special adaptability for this farming section, and will be pleased to know that "Minnie" is now made by the Walter A. Wood Harvester Co., with the same care and fidelity always bestowed on machines bearing the mark of "Walter A. Wood." The Pacific coast office and warehouse is located at No. 290 East Water street, Portland, Oregon, near the eastern approach to the Madison-street bridge.



THE "MINNIE" HARVESTER.

THIEL'S DETECTIVE SERVICE.—This well-known agency, with its general offices at St. Louis, Missouri, and branches at New York, Chicago, St. Paul, Kansas City, Denver and Portland, is one of the strongest associations in the United States for the detection of crime. Portland has cause for congratulation that such an efficient service is placed at the disposal of her citizens. Bankers, merchants, professional men, insurance companies, all unite in saying that for the prevention of frauds and the detection and arrest of criminals, even where they have escaped beyond the limits of the state, Portland is indebted to Thiel's detective service. The general offices for the Northwest are located on the third floor, in the Chamber of Commerce building, in this city. The entire system of the agency here is managed by W. St. M. Barnes, who unites with a suavity of manner, a shrewdness and keen insight into the probable action of fugitives from justice, which has led to many remarkable captures.

PORTLAND ENSOR INSTITUTE AND HOSPITAL.—The world frowns today on those who are guilty of excesses in the use of liquor or other stimulants, where these habits might have been smiled at a generation ago.

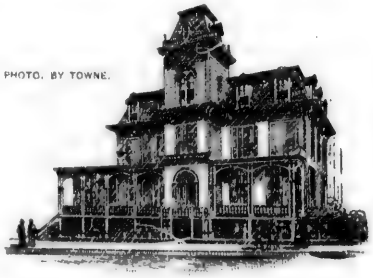


PHOTO. BY TOWNE.

ENSOR INSTITUTE, PORTLAND.

Several remedies were early discovered for the cure of drunkenness, but these were mineral in their nature and their use was fraught with the objection which is open to the introduction of any mineral into the human system. It remained for Dr. T. H. Ensor to discover a remedy for the cure of drunkenness and the morphine habit which is purely vegetable, and which accomplishes all, if not more than was ever claimed for the mineral cures.

Having fully satisfied themselves of the efficacy of the cure, a syndicate of reputable citizens of Portland, last year, established the Ensor Institute and Hospital in this city. The institute is located on the corner of Twelfth and Main streets, in the

large and well arranged buildings so long occupied by St. Helen's Hall. This building was put in condition for the treatment of patients at a great expense. A good home is thus furnished for those who take treatment at this institution. Dr. W. F. Kremer, a well-known physician, is in charge of the institute. The Ensor Institute guarantees to cure liquor cases without causing the least interruption with the usual business of the patient, and the morphine habit is permanently cured without pain to the victim. Those suffering from an insatiable appetite for either alcohol, morphine or tobacco should correspond with the Ensor Institute of Portland, and receive satisfactory assurances that their disease is susceptible of an easy and permanent cure.

THE LOUVRE.—Among Portland's places of amusement there is no resort which enjoys so high a reputation in its line as the Louvre, located on Fourth street, between Washington and Alder. To all intents and purposes The Louvre takes the place of a well equipped club, with advantages not possessed by the latter institution. Fine meals are served here during the day, at a reasonable price, and the best of spirituous and malt liquors and cigars are dispensed to patrons at the bar, or at private tables. Leading magazines and periodicals are kept on file at the Louvre for the accommodation of guests.

THE LOUVRE, PORTLAND.

In the evening, at this popular resort, first-class concerts are given, free of charge, for the benefit of patrons who may be desirous of passing a few hours of pleasant relaxation. These concerts are varied occasionally by entertainments of a high order. The Louvre is conducted as a pleasure resort, which enjoys a high reputation, and it is well worthy of the large patronage it receives.

TWO REPRESENTATIVE PORTLAND MARKETS.—The Franklin Market, Nos. 105 and 107 Third street, between Washington and Stark (telephone No. 1017), and the Oregon Market, corner First and Madison streets (telephone No. 296), enjoy an enviable reputation. The Burckhardt Brothers, proprietors, are experts in selecting high-grade meats and in perfecting them by their cold-storage process of handling meats. The choicest cuts of beef, veal, pork and mutton are found at these markets. The sausage factory conducted by the firm is the best equipped in the Northwest. The Burckhardt Brothers supply meats to hotels, restaurants, and make a specialty of family trade. No order is received by this firm that is too small for the most careful attention.

A GREAT BOON TO SUFFERERS.—While the climate of Portland will stand comparison with that of any American city, it is indisputable that the moisture-laden clouds and the continued rain which prevail here during the winter months are conducive to rheumatism, kidney troubles and cognate afflictions. Against these the famous Geneva mineral water is an unfailing specific, and it is cordially recommended by the Portland medical faculty. Among many citizens who cheerfully testify to its curative powers may be mentioned C. H. Lewis, Hon. Cyrus Dolph, Sheriff Kelly,

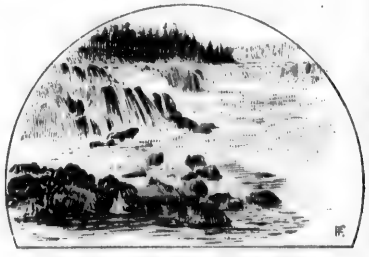
W. S. Newbury, ex-mayor of Portland, and C. K. Harbaugh. The Portland depot for Geneva mineral water is at 207 Morrison street, where all are invited to call and test the water free of charge. The Seattle office of the company is at the corner of Second and Madison streets.

ROHSE'S PARK.—This well-known summer pleasure resort is located on the White House road, Portland's great pleasure drive. The park covers an area of about four acres and has been arranged for the comfort and amusement of patrons. A large dancing pavilion and band stand occupy the center of the grounds, and chairs, tables and vine-covered grottoes are scattered throughout the park for those who find their pleasure in sipping their beer while listening to the music and watching the merry dance. Part of the grounds have been laid out for games and are used by the Turners' society for their exercises. Frequent dances are given at Rohse's park during the summer, at which only leading orchestras are engaged. Imported wines, liquors and cigars and light refreshments are served here.

Oregon City, Oregon.—Oregon City, the seat of justice of Clackamas county, and one of the most important manufacturing centers west of the Rocky Mountains, is situated 12 miles south of Portland, in the beautiful and fertile valley of the Willamette river. The historical traditions and legendary lore concerning Oregon City, and its picturesque location at the mighty falls of the Willamette, make it one of the most interesting spots in the Pacific Northwest. It is visited annually by thousands of tourists, and it is one of the most promising fields for the profitable investment of capital in the Northwest.

FALLS OF WILLAMETTE RIVER, OREGON CITY.

Long before the first intrepid pioneers journeyed across the plains to seek homes in Oregon a little settlement had sprung up at the Willamette falls. In 1829, Dr. John McLoughlin, the chief factor of the Hudson's Bay Company west of the Rocky Mountains, appropriated a tract of land where Oregon City now stands. He possessed absolute power over a vast domain, but his inherent sense of justice and sterling integrity won for him the friendship of the early pioneers. The first American immigration to the Willamette valley arrived in Oregon City in 1842. One of the number, S. W. Moss, was engaged by Dr. McLoughlin to plat the townsite. This work was accomplished with the aid of a rope and a pocket compass. For some years Oregon City was the capital of the territory. The territorial legislature met in a primitive state house of split logs, with slab seats for the members.



A NEAR VIEW, WILLAMETTE FALLS, OREGON CITY.

Events were constantly occurring that kept the village here in a ferment of excitement. At short intervals the Indians of the territory commenced hostilities against the invading whites. The armies that were sent to chastise the savages were

raised at Oregon City. It was in this city that the first Protestant church on the Pacific slope of either of the Americas was built, in 1843. This quaint old Methodist church and its parsonage are still standing in the business center of the city, their moss-covered and weather-worn roofs being shadowed by the first apple tree planted in Oregon.

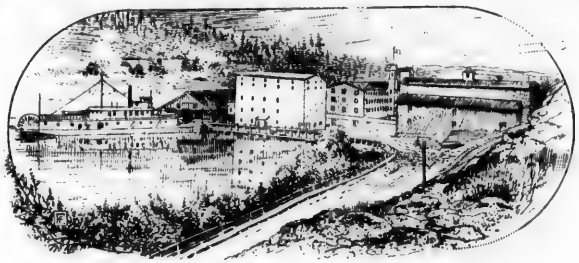
UNDER WILLAMETTE FALLS, OREGON CITY.

The present importance and prosperity of Oregon City, and its future development, depend largely upon the utilization of one of the greatest water powers in the United States.

It is at this point that the navigable Willamette river after flowing through a beautiful valley famous for the fertility of its soil and its great natural resources, pours its great volume of water over a ledge of basaltic rock, making a vertical drop of 42 feet. This is the greatest water power in the world at tide water, and the greatest constant and entirely available one in the United States. It is estimated by hydraulic engineers that at the lowest stage of the water in the dry season, the power of the Willamette river at the falls is from 60,000 to 80,000 horse power. It is now impossible to accurately measure the power exerted. It is believed, however, that when the improvements now being made are completed the falls will have an available force of 100,000 horse power at extreme low water. The magnitude of the falls can be appreciated when it is known that the whole body of a great navigable river flows over a solid rock dam here having a natural spillway of 3,000 feet. Nearly all this immense force can be utilized. On both sides of the river below the falls are solid rock formations suitable in every respect as sites for large and substantial manufacturing plants. There is ample room here for mills and stations to use the entire available force.

WILLAMETTE RIVER SUSPENSION BRIDGE, OREGON CITY.

FACTORIES AT OREGON CITY.



THE BASIN, OREGON CITY.

On the east side of the river are the extensive plants of The Imperial Flouring Mills, the Oregon City Manufacturing Co., Smith & Lovett's ice plant and the station of the Portland General Electric Company. Extending below the falls on this side is a basin 600 feet in length, its entire length furnishing admirable sites for mills and factories. On the opposite side of the stream, at the end of the circular rock dam, are the works of the Willamette Paper and Pulp Company, the Crown Paper Company and the new 12,000 horse-power station of the Portland General Electric Company. These plants face on the canal leading to the locks through which the falls are overcome to navigation. The Portland General Electric Company own the entire water power and a large tract of land adjacent, and have planned improvements to cost $2,000,000. One-half of this sum is now being expended. The Company also own the locks and canal and charge a small toll for freight and passengers carried through by boats. An important improvement made by this company was the widening of the canal from 40 to 120 feet, and the replacing of the old wooden wall of the canal by a solid wall of masonry four feet wide at the top with a batter of one to five, and 34 feet high in places. This greatly increases the volume of water carried in the canal, facilitating both navigation and manufacturing, and allowing the largest river craft to pass each other in opposite directions.

PHOTO BY TOWNE

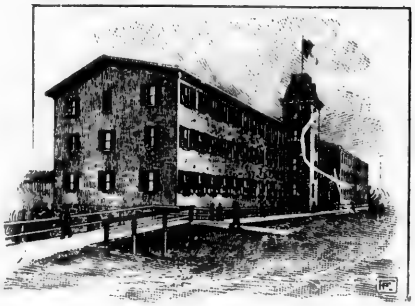
COURT HOUSE, OREGON CITY.

At the edge of this canal the company is now building a monster electric-power station, which will be the greatest station in the world for the generation and transmission of electricity by water power. This station will start with a maximum capacity of 6,000 horse power, which will be shortly afterward increased to 12,000. Nearly all of this power will be transmitted to Portland, where it will be utilized for almost every purpose requiring motive force. The cost per horse power of electric power is much less than that of steam, and its cheapness is a most important factor in the economical running of all kinds of machinery.

PHOTO BY TOWNE.

PUBLIC SCHOOL, OREGON CITY.

PHOTO BY TOWNE.

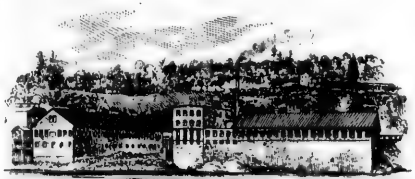


OREGON CITY WOOLEN MILLS.

As Portland grows and develops, so will Oregon City. Their interests are identical. Portland is the great distributing and jobbing center of the Pacific Northwest. The output of the mills and factories of Oregon City is carried to Portland and from there it is shipped to the retailers and jobbers throughout the country. This trade and output will in the future show the same ratio of increase as the population of the Pacific Northwest. There are today a great many articles consumed in this section which come from the East. It is but a question of a year or two when much of this stuff will be manufactured at Oregon City, at a cost less than it can be produced for in the East. An advantage the power here has over theirs is that the river is navigable directly up to the spillway of the falls, thus allowing steamboats and barges to deliver and receive material and products directly from the factories and mills.

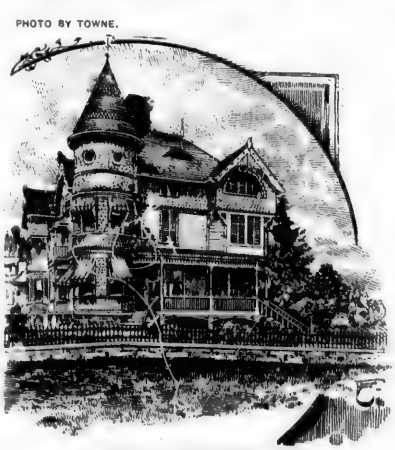
Since the first crude attempt to utilize motive power in manufacturing, water power has remained the cheapest and most serviceable force employed. When a water power of great volume is situated in close proximity to a metropolitan center of population, and in the midst of a country rich in raw materials, it is but a question of time when its entire available force will be utilized for manufacturing purposes. This is illustrated at St. Anthony falls, Minneapolis, where the entire available force of 20,000 horse power is used in the operation of flouring and saw mills. There are at the Willamette falls no rapids or dangerous currents, and no conditions that ever interfere with the steady application of the power. In the winter there is no floating ice, freezing or anchor ice. Since the first utilization of the power in 1865, nothing has occurred to stop the running of the woolen mills established in that year.

PHOTO BY TOWNE.



THE GREAT PULP MILLS AT OREGON CITY.

PHOTO BY TOWNE.



RESIDENCE, P F. MOREY, OREGON CITY.

Oregon City, its factories and mills, have unexcelled rail and water transportation facilities. The city is a station on the Southern Pacific railroad. A line of steamboats is operated from this point to Portland and down the Willamette valley

a distance of 100 miles. The close proximity of Oregon City to Portland practically gives it all the transportation facilities possessed by that city. Thus it has the advantages accruing from three transcontinental railroads and the large fleet of steamers and sailing craft that ply between Portland and the ports of the Pacific and Atlantic oceans. Doubtless no other city of this size has the street-car facilities possessed by Oregon City. The East Side Railway Company operate a line from the south end of Main street, the principal business thoroughfare, to Portland. Cars run on this line every hour. A branch line owned by the company runs to Gladstone, Oregon City's most attractive suburb. This beautiful tract of land is picturesquely situated on the banks of the Clackamas river, about a mile distant from the business center of the city. It covers an area of 60 acres and was platted by its owner, Mrs. S. M. McCown. It is dotted with neat cottages, and lies on the west side of the electric line.

PHOTO BY TOWNE.

CHARMAN BLOCK, OREGON CITY.

The Willamette Railway Company have recently built an electric line from the west end of the suspension bridge, at Oregon City, south to the new manufacturing town of Willamette Falls, situated at the confluence of the Tualatin and Willamette rivers, a distance of three miles from Oregon City. The site of this new suburb is an admirable one, both for factories and residences. A project is now under way to build a belt line from Main street to the highlands and residence district. It is also believed that the Portland General Electric Company will eventually extend the line of the Willamette Railway Company, which they control, to Portland.

Oregon City is built on both sides of the Willamette river and is connected by a free suspension bridge. The business district of the city lies on the east bank of the river, back of which is a moss-covered perpendicular bluff of basaltic rock, from the summit of which a broad plateau stretches back inland. It is on this plateau that the residence district is located. In this part of the city are broad macadamized streets, lighted by electricity, and many elegant residences, surrounded by tastily arranged lawns. Nearly every house is surrounded by fruit trees, and in the summer months by a bewildering profusion of flowers.

On the brow of the bluff is the imposing mansion of P. F. Morey, the president of the electric company. From this bluff there is a beautiful view of diversified landscape scenery.

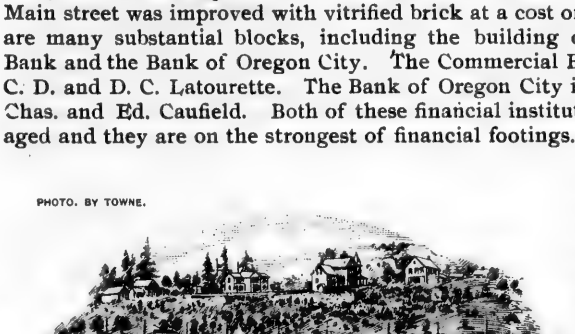
North of the city, the Clackamas river is seen, tortuously winding in and out of orchards and grain meadows until it is finally lost in the mighty Willamette. Immediately below is the business district throbbing with life and activity. Beyond it the river falls 42 feet into a basin 160 feet deep and sends its rainbow-tinted spray 100 feet into the air. Below the falls, on both sides of the river, are great mills turning out millions of dollars

PHOTO BY TOWNE.

A GLIMPSE OF GLADSTONE NEAR OREGON CITY.

worth of products annually. These mammoth concerns and the other industrial plants, including an excelsior factory, a brick yard, two sash and door factories and iron works, are industries, which with its exceptional natural advantages, and its favorable location, have resulted in Oregon City attracting a population of 5,300. Unlike the citizens of many other cities, the people of Oregon City act as a unit in everything tending to promote its welfare. This public spirit is evidenced by the many substantial improvements that have been made in the city. In the past year Main street was improved with vitrified brick at a cost of $40,000. Along this street are many substantial blocks, including the building occupied by the Commercial Bank and the Bank of Oregon City. The Commercial Bank is conducted by Messrs. C. D. and D. C. Latourette. The Bank of Oregon City is successfully run by Messrs. Chas. and Ed. Caufield. Both of these financial institutions are conservatively managed and they are on the strongest of financial footings.

PHOTO. BY TOWNE.



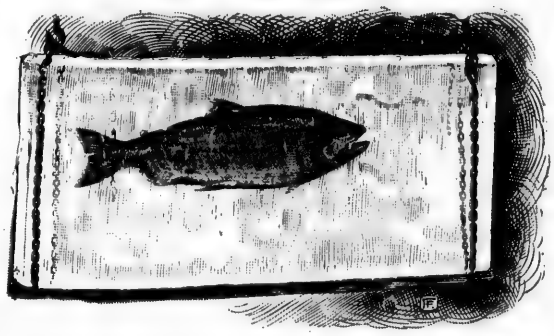
SUNSET ADDITION, ACROSS WILLAMETTE RIVER FROM OREGON CITY.

Occupying a commanding site, near the head of the street, is the Clackamas County court house, a substantial stone edifice, situated in the center of a grassy square. The city has an admirable public school system. The High School, costing $14,000, is a handsome frame structure, as is also the Seventh-street school which cost $10,000. Within a radius of one mile from the court house there are seven schools, four of which are within the city limits. There are 27 teachers employed in these, and the total valuation of the school property is about $65,000. There are also here a Catholic parochial school and a free kindergarten. Of churches, Oregon City has 12. The city is thoroughly lighted by electricity generated in the 3,000 horse-power plant of the Portland General Electric Company. This electricity is also used in operating the East Side railway, as far as Milwaukie, and in lighting the city of Portland. Among the other features of Oregon City is a splendid waterworks system, the pumping station of which is the largest in the state outside of Portland. In the business section is a sewerage system costing $11,600, and in the residence district a separate system is now being built which will cost about $10,000. The city has a two-story brick jail, built on hygienic and humanitarian principles, at a cost of $7,000. The fire department, an excellent and well-disciplined organization, has three hose carriages and one hook and ladder truck.

All business of quasi-public nature relating to Oregon City is transacted through the Board of Trade. Much of the prosperity and the improvements of the city are due to this organization. It includes in its membership nearly all the representative men of the city. Any information about Oregon City and vicinity will be cheerfully furnished upon application to any officer or member of the Board. The officers are

George C. Brownell, president; F. E. Donaldson, secretary; F. T. L. Charman, treasurer. Mr. Brownell, the president of the board, is one of the prominent members of the Oregon bar. He was born, in 1858, in Essex county, New York. He was admitted to the bar in his native state, and subsequently practiced law in Kansas. In 1890 he removed to Oregon City, where he at once became prominently identified with every public movement.

The pioneer manufacturing enterprise of the falls is the woolen mill of the Oregon City Manufacturing Company. The mill was established in 1865, and it is now a 14-set mill, and the largest west of Ohio. It consumes annually over 1,000,000 pounds of wool, and pays to its operators $100,000 a year. The output of the mill consists of blankets, cashmeres, flannels, tweeds, woolen underwear and hose, which is largely shipped to the East. The company also operates a soap factory which turns out 100,000 pounds per month. On the edge of the canal on the opposite side of the river from the woolen mills, is the extensive plant of the Willamette Pulp & Paper Company, a corporation with a capital of $600,000. This concern leases 2,600 horse power, and has a daily capacity of 20 tons of pulp in one mill by mechanical process and 10 tons in a sulphite mill by chemical process. In addition to this is a mammoth paper mill capable of turning out 20 tons of all kinds of paper. The requirements of this company alone, for the making of pulp and paper, outside of its water power, are some 60,000,000 gallons of water per day, or fully five times the quantity consumed by the city of Portland. Adjoining this plant is the Crown Paper Company's mill, erected at a cost of about $200,000. They have a daily capacity of seven tons of wrapping paper of the various grades, and in addition a large output of straw and binders' board. Among the other industrial plants here are the two large mills and mammoth elevator of the Portland Flouring Company. The mills have a daily capacity of 900 bushels, and in the elevator a storage capacity of 200,000 bushels. The output of these mills is a staple article of commerce to the Orient and at Liverpool.



OREGON'S MAMMOTH WORLD'S FAIR SALMON (FROZEN AND SHIPPED FROM SMITH & LOVETT'S ICE WORKS, OREGON CITY.)

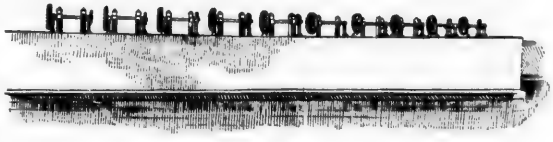
Another enterprise here of considerable magnitude is the large artificial ice plant owned by Messrs. Smith & Lovett. This is one of the most perfectly equipped ice plants in the country, and owing to the cheapness of motive power it can manufacture ice at almost what the fuel costs when steam is used. The plant cost over $50,000, and has a daily capacity of 50 tons. The ice is made in cakes 10 feet long, 3 feet wide and 10 inches thick, which weigh from 1,300 to 1,800 pounds, and which are nearly transparent. This ice is consumed in Portland, where it is in great demand.

THE PORTLAND GENERAL ELECTRIC COMPANY was organized August 5th, 1892, with a capitalization of $4,250,000, this corporation being a consolidation of the Willamette Falls Electric Company and the Willamette Transportation & Locks Company. At the time of organization it acquired all the property formerly owned by the two last-named companies. This property consisted of all the electric lighting plants in Portland and Oregon City, the entire water power of the Willamette river at Oregon City, the locks of the Willamette river, which were built at a cost of about $600,000; 2,000 acres of land, having a water frontage of four miles, above and below the falls, at Oregon City, and covering all available building sites for manufacturing institutions, and many other valuable assets.

STATION A, PORTLAND GENERAL ELECTRIC CO., OREGON CITY.

The officers of the company are: P. F. Morey, president; H. M. Byllesby, first vice-president; F. V. Holman, second vice-president; Bank of British Columbia, treasurer; Charles H. Caufield, secretary; H. C. Levis, assistant secretary; H. W. Goode, general manager. Board of Directors: P. F. Morey, president; H. Failing, president First National Bank, Portland; F. Dekum, president Commercial National and Portland Savings Banks, Portland; T. Woodward, president United States National Bank, Portland; C. A. Coffin, president General Electric Co.; H. M. Byllesby, president Northwest General Electric Co.; F. V. Holman, counselor-at-law; S. Farrell, commission merchant; W. K. Smith, capitalist; H. W. Goode, general manager; C. H. Caufield, manager Bank of Oregon City.

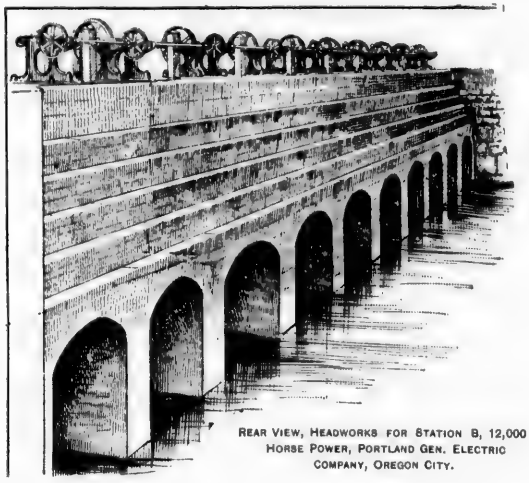
The company is making large improvements on its property both at Oregon City and Portland, the principal feature of which is the construction of a new 12,000 horse-power electric station on the west bank of the river at the falls. The headworks and ground work of station walls, and flumes for 12,000 horse-power, will be installed at once, with water wheels for 6,000 horse-power, and 3,000 horse-power of electrical machinery. The balance of the water wheels and electrical machinery can be added from time to time, as additional capacity is required. The building will be constructed of concrete and iron, and be absolutely fire proof. It is expected that this new plant will be in operation early in the year 1894. The wheels in this station will be Victor turbines, of a vertical type, of 600 horse-power capacity each, and on top of each shaft will be coupled direct the armature of a 600 horse-power electric generator. As soon as the new plant is completed, it is the intention of the com-



FRONT VIEW, HEADWORKS STATION B, PORTLAND GENERAL ELECTRIC CO., OREGON CITY.

pany to extend its lighting business, and to also furnish electric power for stationary and railway purposes.

The present plant of the company, located on the east bank of the river at the falls, has been in operation since the year 1890. This plant, called Station A, has a capacity of 3,000 horse power in water wheels and electrical machinery, and its entire capacity is taken up in commercial and city lighting at Portland and Oregon City.



REAR VIEW, HEADWORKS FOR STATION B, 12,000 HORSE POWER, PORTLAND GEN. ELECTRIC COMPANY, OREGON CITY.

To transmit the electricity between stations at the falls and Portland, a distance of 13 miles, overhead conductors are used and high-tension currents. The loss in transmission on the arc circuits is about 10 per cent, and on the incandescent circuits about 20 per cent. It is expected, however, that from the new station the loss on incandescent circuits will not exceed 10 per cent between Oregon City and Portland.

The company at present leases about 4,000 horse-power of direct water power to mills and factories, located on both banks of the river, at Oregon City, and is prepared to offer strong inducements to any first-class manufacturing concern desiring a location.

Woodburn, Oregon.—Woodburn, Marion county, Oregon, is an incorporated town of about 1,000 population. Most of this population has been gained during the past five years. The town enjoys the best of railroad communication, being located on the main line of the Southern Pacific, 35 miles south of Portland, and it is also the northern terminus of the Woodburn-Springfield branch of the same road, a line that taps the best part of Western Oregon.

PUBLIC SCHOOL, WOODBURN.

The principal support of the town is the rich surrounding farming section. A single flouring mill, with a daily capacity of 140 barrels, is the only manufacturing industry supported here. The raising of trees at this point has developed into a business of considerable magnitude, and Woodburn is frequently referred to as a "nursery town." Nineteen tree-growing farms in the vicinity of Woodburn now ship more than 2,000,000 trees annually to various points on the coast. The largest of these nurseries contains more than 200 acres, nearly all of which is devoted entirely to fruit-tree culture. The establishment of the nurseries in the vicinity of Woodburn has tended to a gradual appreciation in the prices of the rich farming lands adjacent,

and the valuations of good lands near the town are perhaps a little higher than as good lands can be bought for in other parts of the valley.

Woodburn has a modern school building which was recently erected at a cost of $10,000. It contains eight rooms, well lighted and ventilated. Only five of these rooms are occupied at the present writing. Five teachers are employed in the public school here, and the average daily number of pupils enrolled is about 250. Woodburn supports five church organizations, two Presbyterian, one Methodist, a United Brethren and an order of the Seventh Day Adventists.

A bank on a strong financial footing is located at Woodburn, and all the different lines of business are well represented here. *The Independent*, a weekly paper, furnishes the people of the town with news of a local interest. Two hotels and two livery stables are located at this point. Woodburn, owing to its exceptional facilities for shipping afforded by the railroads passing this point, will always be an important town of the Willamette valley, and its growth in the future will, doubtless, be as marked as has been noted here during the past few years.

Gervais, Oregon.—Gervais is a small town of about 400 population, located on the main line of the Southern Pacific railroad, 38 miles south of Portland and 14 miles north of Salem. The place enjoys considerable trade with the rich tributary farming district. A roller flouring mill with a daily capacity of 50 barrels is located here. The town supports one weekly newspaper, *The Star*. A city hall is maintained with a seating capacity of 400; two hotels furnish fair accommodations to the traveling public, and one livery stable and a number of well stocked stores comprise the mercantile interests of the place.

Gervais, in common with the other prosperous towns of the Willamette valley, enjoys the benefits of good schools. Two schools are maintained here, the public and the parochial. The average daily attendance at the public school is about 60, while at the parochial school the enrollment for the past year was 75 scholars daily. The latter school is in charge of the Benedictine Sisters. This school is conducted in a large 10-room building originally intended for use as a convent, whose erection involved an outlay of $5,000. Five teachers are employed in the parochial school, while the public school is taught by two teachers. Three church organizations are maintained at Gervais, the Presbyterian, Baptist and Catholic, and each of these organizations is on a prosperous financial footing.

Salem, Oregon.—Salem, the second city of Oregon in population and commercial importance, is one of the most attractive populated centers of the Pacific coast. It is the state capital which insures its social status. It is the judicial seat of Marion county, one of the richest counties of Western Oregon, which makes it the principal point of interest to the people of a very prosperous section, and its location in the center of a valley which, owing to its fertility and beautiful surroundings, attracted the attention of the earliest settlers within the borders of the present state of Oregon, has held for Salem a trade that has made the city one of the most important inland commercial centers of the Pacific Northwest.

STATE CAPITOL, SALEM.

Salem was incorporated in 1857. In the pioneer history of the state the city played

a most important part. Its selection as the state capital was but a fitting acknowledgement of the many claims the city was enabled to advance for the honor, and the erection of the elegant edifice of the state capitol has sustained the wisdom of the selection of this city as the capital by the early legislators of the present rich and prosperous state of Oregon.

PHOTO. BY CHERRINGTON & BRO.

COMMERCIAL STREET, SALEM.

Salem is located on the east bank of the Willamette river, which is navigable practically the entire year between this point and Portland. It is also on the main line of the Southern Pacific, 52 miles south of Oregon's metropolis. The corporate limits of the city extend for a distance of two miles along the bank of the Willamette river and for an equal distance east of the water front. The townsite occupies a gently sloping, level stretch of prairie, the fall from the higher parts of the city to the level of the river being sufficient to afford a natural system of drainage. The surrounding country is all rich and highly productive, and in the immediate vicinity of Salem are found some of the finest farms of the state.

The present population of Salem is about 12,000. In the immediate suburbs, however, are the homes of some 3,000 additional people, a population that should be rightly credited to Salem proper. The appearance of the city is decidedly metropolitan. A generous impulse with a true appreciation of future municipal importance must have been a guiding factor in laying out the original townsite by the early projectors of a town at this point. The main streets are all 100 feet wide and all the streets are lined with tall and graceful elm and maple trees, which add greatly to the general beauty of the surroundings. With but few exceptions, the main business portion of the city is solidly built up with brick and stone structures. Many of these buildings are three and four stories in height and some of them are as attractive in architectural design and finish as are any of the best business blocks of Portland.

Salem, like Portland, is an exceptionally wealthy city. An air of prosperity pervades the business community. Attractive displays of goods are made in the plate-glass fronts of the leading stores, and some of the largest houses here carry stocks of goods ranging in value from $25,000 to $75,000. In addition to the trade which a city of 12,000 population naturally creates for itself, Salem also does a large amount of business with numerous towns of Marion and Polk counties and also with the farming districts of this part of the state. Statistics show that Salem is the seat of the most productive agricultural county of Oregon. While the soil of the and of other parts of the Willamette valley may be equally as fertile as is that of the

PHOTO BY CHERRINGTON & BRO.

BRIDGE ACROSS WILLAMETTE RIVER, SALEM.

land of Marion county, the latter county is one of the older settled portions of the state, and for this reason more of its land has been put into cultivation than in other counties of the valley. The present population of Marion county is about 23,000. Salem is the trading center of all of Marion county and, as before stated, of a considerable part of Polk county on the other side of the river, the section that has been made tributary to the city by the construction of the fine free steel wagon and passenger bridge which spans the river at this point. Salem is the principal supply point for about 14 smaller towns in the tributary district, a trade sufficient in importance to have already justified the establishment of considerable jobbing business at this point in connection with the large retail trade of the city.

Salem, as the capital of the state, is naturally the home of the principal state institutions. Located here are the penitentiary, state asylum for the insane, the state school for the blind, the deaf and the dumb, the state reform school, as well as being the place of location of the state capitol, one of the finest public buildings on the coast. The location of these public institutions at Salem has done much to advance the interests of the city as a business center, and the money regularly disbursed here by the state is a considerable source of revenue to the business community of Salem.

Salem as a manufacturing point is one of the most important of the state. Two large flouring mills, a woolen mill, a fruit cannery and evaporator combined, one sawmill, two sash and door factories, iron works, carriage factory, a brewery and ice factory, and several smaller industrial plants comprise the factories located at the state capital. The flouring mills are both equipped with the full roller process and the combined capacity of the two mills is 1,200 barrels a day. The wheat for running these mills is raised principally in Marion and Polk counties, and the output of the mills is shipped principally to Liverpool. The mills manufacture the finest grade of flour and the brand, "Salem Fancy Patent Roller Flour," manufactured here is well known throughout the entire state. About 30 men are employed regularly in these two industrial plants. The woolen mills are in constant operation and furnish employment to about 50 men and women. The capacity of the latter mills is about three-set. About 400,000 pounds of wool are consumed in these mill annually. The product is a very fine grade of woolen goods, which finds a ready sale in the Eastern and California markets. The sawmill here employs about 40 men and has a capacity of 40,000 feet of lumber per day. The other factories of the city give employment to from 5 to 15 men each.

PHOTO BY CHERRINGTON & BRO.

COURT HOUSE, SALEM.

Salem already enjoys the benefit of a considerable water power, which is developed at this point by a stream of water of considerable magnitude. This available power, however, can be greatly increased by cutting a canal to connect with the Santiam river, 10 miles south, and this work can be done at a comparatively small expense. This canal would develop, for manufacturing purposes at Salem, an available power of 5,000 horse, and it is highly probable that this important work will be carried to a successful termination in the near future.

Salem already boasts of a good system of water works. Twenty-five miles of cast-iron mains, ranging from 1 to 21 inches in diameter, are now laid through the

city. The reservoir, with a capacity of 2,000,000 gallons, is at an elevation of 175 feet above the business portion of the city, an elevation that insures ample pressure in the city mains to throw a stream over any of the highest buildings of the city. At the pumping station are three powerful pumps with a combined pumping capacity of 8,000,000 gallons of water per day, a supply that will be more than ample for the requirements of Salem for water for many years in the future.

Two fine lines of electric cars are in operation at Salem. The two lines of street railway cover the business portion of the city and run out as far as the state fair grounds, connecting with the Southern Pacific railroad depot, the penitentiary, insane asylum, and reaching as far out as the southern limits of the city. Cars run regularly at intervals of 20 minutes each. About 10 miles of well equipped electric road are in successful operation here. Salem is thoroughly lighted by electricity, both the arc and incandescent systems of lighting being used. An efficient police and fire department is maintained here. Salem has singularly escaped disastrous conflagrations in the past, and the precaution taken here against fire practically removes all danger of a serious holocaust in the future.

PHOTO BY CHERRINGTON.

ELECTRIC CARS, SALEM.

Marion and Polk counties are united at Salem by a steel bridge which spans the Willamette at this point. This bridge was completed two years ago at a cost of $65,000, and is free to both foot travel and teams.

As an educational center Salem is one of the most important cities of the state. Five commodious public school buildings are located in different parts of the city. Three of these are models of architectural design and are excellently arranged for school purposes. A thorough and rigid system of training is adopted, and the courses of study range from the kindergarten and primary to the high school. A staff of 30 teachers is employed in the public schools here, and the average number of scholars in daily attendance is about 1,600. In addition to the fine public schools Salem has the advantages for higher learning afforded by the Willamette University, which was founded here by the Methodist Mission in 1843. This school now ranks first among the great schools of the state. It offers a full collegiate course, in addition to which departments of law, medicine, music and art are maintained. The average number of students in attendance at the Willamette University in all departments during the past year was about 300. The Sisters' Academy, a Catholic institution, the Friends Polytechnic Institute, and the Capital City Business College are the other seats of learning maintained at the capital city.

PHOTO. BY CHERRINGTON & BRO.

EAST SALEM SCHOOL, SALEM.

Salem may be appropriately denominated a city of state institutions, fine residences, schools and churches. There are no less than 14 church organizations main-

tained here, some of which worship in very fine church buildings. The denominations represented are the Presbyterian, Cumberland Presbyterian, Congregational, Evangelical, Evangelical Mission, Baptist, Free Methodist, Friends, M. E. South, Methodist Episcopal, Catholic, Episcopal, Church of God, and United Brethren.

THE STATE INSTITUTIONS.—The Oregon Institute for the Blind now has a daily attendance of about 20 scholars. The literary faculty of the school is composed of four teachers. The pupils employ their leisure time in making hammocks, about 200 of which are turned out every year. These are sold principally at wholesale. The State Reform School is located about 4½ miles south of Salem. The building is a handsome four-story brick, which was recently erected at a cost of $30,000. This institution is under the best of management, and the incorrigible youth who are sent here soon yield to the rigid discipline enforced. The largest number of boys in attendance at this school, at any one time during the past year, was 80. A farm of 317 acres adjoins the school building. All the boys in attendance are compelled to do light farm and garden work, and also to assist in work about the building. The Oregon school for the education of deaf mutes had 39 pupils enrolled during the past year. Both girls and boys are admitted to this school. Two of the teachers and most of the employes of the school are deaf mutes themselves. A printing office and broom shop have been provided for this school to give needed employment to the pupils in attendance.

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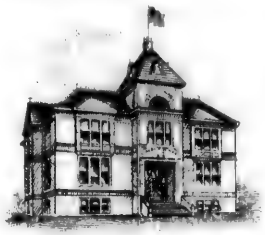

LINCOLN SCHOOL, SALEM.

The Oregon state penitentiary is located two miles east of the business portion of the city. The principal employment for the convicts is furnished by the Northwestern foundry, which is located on the penitentiary grounds. This foundry turns out from 25,000 to 30,000 stoves a year. It pays the state 40 cents a day for each convict employed. Connected with the penitentiary are 160 acres of fine land. The prisoners have the benefit of a $1,000 library, and they are well cared for, while a most rigid system of discipline is maintained.

One mile east of Salem, on a commanding eminence, is located Oregon's state asylum for the care of the insane. Connected with the asylum is a farm of 1,000 acres. The farming of this land is conducted on an extensive scale, many of the convalescent and tractable patients being used for this purpose. Large buildings for the storing of grain, housing of stock, and for other purposes, have been built here. A good water-works plant and fire department, equipped with electric-alarm signals, are maintained on the asylum grounds. The patients have the benefit of a large and well equipped bath house, and every needed improvement for the proper care of the insane has been provided here by the state. The Oregon state asylum is conceded to be one of the best equipped and best managed institutions of the kind in the United States. About 800 patients are now under treatment here, and this number is constantly being increased with the growth of population of the state.

PHOTO. BY CHERRINGTON & BRO.

YEW PARK SCHOOL, SALEM.

The state capitol and the Marion county court house, located at Salem, are models of architectural skill. They occupy prominent positions in the center of the city, and are the first buildings seen as the train rolls into the city from either direction in entering the corporate limits.

Salem's history in the past has been one of constant progress. The country immediately tributary is so varied in its powers of production, and the location of the city is so favorable for holding the vast trade of this section that retrogression in Salem's prosperity will be an unknown factor in the future history of the city. Within the past three years hundreds of small farms have been sold in the immediate vicinity of Salem, and most of these small pieces of land are being planted in fruit trees. All kinds of farming is done in this district, with the principal attention being paid to the raising of wheat. The farmers of this part of the state have recently been paying considerable attention to the raising of fine stock, both horses and cattle, and this industry has proved a great source of profit to those who have engaged in it. Land in this part of the state is still held at reasonable prices, and with the possibilities here for diversified farming and fruit culture, the country now tributary to Salem will continue to fill up for many years in the future with a thrifty class of people, a class that has already made this one of the most inviting farming sections of the coast.

PHOTO. BY CHERRINGTON & BRO.

STATE INSANE ASYLUM, SALEM.

The Salem merchants have the benefit of several lines of steamboats which operate on the Willamette river, both north and south of the city. Regular connection is made from this point by water with Portland and the points on the river north, and also with the Oregon Pacific railroad at Albany and Corvallis south, thus giving the merchants of Salem the full benefit of the competitive rates of freight afforded by the rival lines of railroads and steamships which reach the state from outside commercial centers.

PHOTO. BY CHERRINGTON & BRO.

STATE PENITENTIARY, SALEM.

Salem has a good morning paper in *The Statesman*, which also publishes a weekly edition. The paper is published by The Statesman Publishing Company, which is a company of ample capital, and which is also ably managed. The controlling force in the company is Mr. R. J. Hendricks, who is also editor of *The Statesman*. Mr. Hendricks is recognized as one of the brightest young newspaper men of the state, and the work he has done on *The Statesman* has entitled him to an honorable position among Oregon's journalists.

In addition to *The Statesman*, there is also published at Salem *The Capital Journal*, which fills the evening field. There are also published here the usual number of weekly papers always found in a city of the size of Salem.

PHOTO. BY CHERRINGTON & BRO.

STATE REFORM SCHOOL, SALEM.

LADD & BUSH.—The oldest and largest banking institution between Portland and Sacramento is the bank of Ladd & Bush, at Salem. This bank was founded in 1868, and it now does an enormous business. It has connections with other banks throughout Oregon, Washington, Idaho, Montana, and throughout the coast and in

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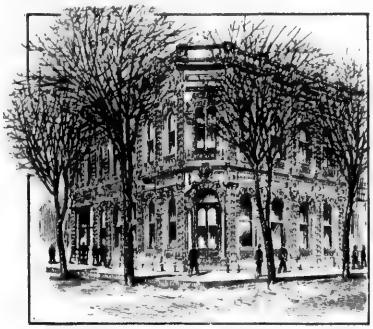

BANK, LADD & BUSH, SALEM.

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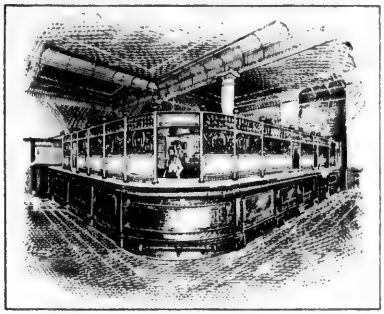

INTERIOR, BANK, LADD & BUSH, SALEM.

the East. It buys and sells exchange on all parts of the world, and makes collections throughout the United States, British America and Mexico.

In addition to the bank of Ladd & Bush, there are three other large banking houses at Salem, all on a strong financial footing. The finances of the city are good, and everything in Salem, from bank stock to the business of the individual merchants, ranks high in the most reliable commercial reports made on the state.

Marion County, Oregon.—The Willamette river and Butte creek mark the boundary line between Marion and Clackamas counties on the north; Marion county is separated from Wasco on the east by the summit of the Cascade range of mountains; on the south the Santiam and North fork of the Santiam rivers separate Marion from Linn. and the Willamette river is the boundary line of the county on the west.

The area of good land found in Marion county is about 36 miles north and south and 15 miles east and west in extent. Contained in this farming belt are about 900,000 acres of land highly fertile and easily cultivated. The county contains about 14 townships that are still unsurveyed, but the greater portion of this unsurveyed section is mountainous and not adapted to a higher state of cultivation. The distinctively mountainous sections of the county, however, are principally covered with a dense growth of timber, and lumbering in those forest districts is carried on to a considerable extent. About one-half of the total area of Marion county may be classed as agricultural land. This arable district is principally level, although it contains a great diversity of soil. Diversity of soil means diversity of crops, and it has been proved that diversified farming is the most profitable in any section of country.

The climate and soil of the entire Willamette valley do not vary materially in different locations. Marion county, from being located near the principal city of the valley and from being longer settled, is, however, richer than are the other valley

counties. In the low, level portions of the county, especially in lands bordering on the Willamette river, the soil is of a heavy black loam, the yields on which are always heavy. In addition to the Willamette river numerous other watercourses lead through the county. Prominent among these streams are the Santiam river, Butte creek, Pudding river, Spring and Mill creeks. The valley of the latter stream varies in width from one-half to three miles, and it is highly fertile. In the undulating and more hilly portions of the county are patches of white oak, fir and cedar, but these small forest growths are being gradually cleared off and the cleared land is found to be easily cultivated and very productive.

On the west side of Marion county flows the Willamette river, which affords a means of cheap transportation to the farmers here during all seasons of the year. The Santiam river, on the south, is navigable for light-draft steamers for a distance of 10 miles above the point where it joins the waters of the Willamette river.

French, Howell, Santiam, Salem and North and South prairies are local names applied to certain portions of the prairie lands of the county. These different prairies embrace thousands of acres of highly productive lands, lands that are now principally occupied. Wheat, hops, peaches, prunes, pears, cherries and root crops are chief productions of the soil of this part of the state. Considerable attention is now being paid by the farmers of Marion county to dairying and stockraising, with the best of results.

The annual report of Marion county's schools, for 1892, showed that during that year the total number of pupils enrolled was 5,374. The estimated value of all school property in the county was $210,280. Employed in teaching these schools were 150 teachers, whose monthly salaries averaged about $45 each. The total assessed valuation of all property in Marion county, for 1892, was a little less than $16,000,000.

Turner, Oregon.—Turner is a small incorporated town with a population of about 250, located on the main line of the Southern Pacific railroad 60 miles south of Portland. It supports one flouring mill with a daily capacity of 200 barrels, which is operated by water power obtained through a race from Mill creek, on which the town is situated. Mill creek is an arm of the Santiam river, which is distant about 10 miles from Turner. A large grain warehouse with a capacity of 60,000 bushels of wheat is also located at this point.

The public school system of Turner is well organized and the daily attendance at public school here is about 60 pupils. Two teachers are in charge of the school. The Presbyterian, Baptist, Methodist and Christian denominations have churches at this town. The last named order worships in a large tabernacle, 100 x 150 feet in size, which was recently erected at a cost of $10,000 by George Turner, after whose father the town was named. Turner supports one hotel and one livery stable, and the different lines of business are well represented here. The principal shipment from this point is flour, and the town is mainly supported by the prosperous farming community adjacent.

Jefferson, Oregon.—The first settlement at the present site of Jefferson was made in 1853. The town was incorporated in 1870, and the population at the present writing is about 300.

Jefferson is on the main line of the Southern Pacific railroad, 70 miles south of Portland, 19 miles south of Salem and 10 miles north of Albany. Three passenger trains pass this point each way daily. The Santiam river flows by the townsite and

this stream furnishes an available and large water power at this point. This power is now used to run the flouring mill located here which has a daily capacity of 125 barrels. A small lumber mill with a daily cutting capacity of 10,000 feet, at Jefferson, is also run by this same power. Owing to its most favorable location in a rich farming section, Jefferson is a favorable trading point for a very large district. The stores of the town are well stocked, and some of the business houses here enjoy a very large trade. The general merchandise store of Anton and Alois Tanzler, which is conducted under the firm name of A. Tanzler & Co., furnishes a notable example of the extent to which this line of business is carried on at Jefferson. This firm carries a stock of goods valued at from $7,000 to $10,000, and in addition to their large local trade they enjoy a country patronage reaching out into the rich farming district lying within a radius of seven miles of Jefferson.

The public schools of Jefferson have a daily average attendance of 75 scholars. Three teachers are regularly employed in these schools. Three church organizations own their own buildings at this point. These are the Evangelical and two organizations of the Methodists. The handsome church building of the Evangelical denomination has only been recently constructed. Jefferson supports one weekly paper, *The Review.* The people of Jefferson enjoy the benefits of a free library. The town has a public hall with a seating capacity of 300, and two hotels and one livery stable furnish ample accommodations to the traveling public that frequents this point.

A free bridge, constructed at a cost of $12,600, spans the Santiam river at Jefferson. Other public improvements of a substantial nature are also noted here. The assessed valuation of town property is $100,000, and the place has no bonded indebtedness. The principal shipments from Jefferson are grain, flour and farm produce. In the farming district tributary to Jefferson, hop-raising and fruit-culture are now receiving considerable attention, and as the soil of this section is especially adapted to these crops, the raising of fruit and hops will probably claim more of the attention of the farmers of this part of the state in the future.

Albany, Oregon.—Albany, the judicial seat of Linn county, is situated on the east bank of the Willamette river, in nearly the center of the rich Willamette valley. It is the place of junction of the two important lines of railroad of the Southern Pacific and Oregon Pacific systems, the former of which runs north and south through the state, while the latter road crosses the valley from east to west. By the Southern Pacific line Albany is 79 miles south of Portland, and it is 80 miles from Albany to Yaquina Bay by the line of the Oregon Pacific. The latter road, in addition to affording connection between Albany and Yaquina Bay, is also extended eastwards to the foothill districts of the Cascade Mountains, thus opening up the rich part of the Willamette valley east of Albany to the merchants of this city. In addition to the two main lines of road mentioned above, Albany is also the place of junction of the through line of the Southern Pacific and the Lebanon branch of the same road. The Lebanon branch extends west from Albany to Lebanon, a distance of 13 miles, and this line also makes connection at Lebanon Junction, nine miles

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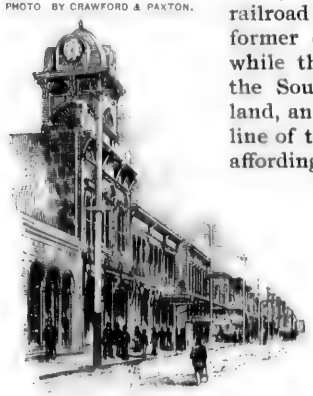


MAIN STREET, ALBANY.

east of Albany, with the Woodburn-Springfield branch of the Southern Pacific, which runs north and south through the rich part of the Willamette valley west of Albany. The Oregon Pacific connects this point with the West Side division of the Southern Pacific at Corvallis, 11 miles west of Albany. No point in the valley enjoys the advantages for cheap freight transportation which the business men of Albany are able to avail themselves of. They have the benefit of the main line of the Southern Pacific, extending north and south through the entire state; they can reach the rich country east by the rival lines of road of the Oregon Pacific or the Southern Pacific systems; they can reach the San Francisco market either by way of the Oregon Pacific road to Yaquina Bay, where connection is made by steamships for all points on the coast south, or by the Southern Pacific to Portland, where close connection is made with a number of steamer lines, or with freight vessels plying up and down the coast; and in addition to the railroads, the Willamette river is navigable at nearly all seasons of the year between Albany and Portland, and during the higher stages of water in the river, steamboats ascend the river above Albany for a considerable distance.

Within a radius of 20 miles of Albany is a rich agricultural section of country that now forms one of the best parts of the Pacific Northwest. East of the Willamette river this magnificent farming belt is drained by the North and South Santiam and Calipooia rivers, streams that have their sources in the Cascade Mountains, and which carry a large volume of water at all seasons of the year. West of the Willamette river the district is drained by Mary's and Luckiamute rivers and Soap creek, which rise in the Coast range of mountains. Nearly the entire course of all of these streams lies through fertile valleys perfectly adapted to diversified farming, including grain-raising, fruit-culture and stock-raising. Some of the finest farms on the coast are found in this part of the state, and the country of which Albany is the leading trade center has long been recognized as one of the richest sections of the Northwest.

The present population of Albany is about 5,000. The city has a decidedly metropolitan appearance. A steam-motor line connects the union depot, where all passengers alight from the incoming trains, with the business part of the city. The main business street, for a distance of three or more blocks, is solidly built up with fine-appearing brick and stone structures. This street is well macadamized, and the sidewalks fronting the principal business houses are paved with stone. The large plate-glass show windows of the largest stores are filled with a high class of goods, and some of these stores are as well stocked as are any of the largest retail establishments of Portland.

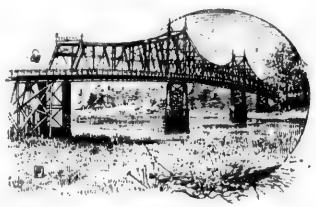
The people of Albany are thoroughly imbued with the modern spirit of enterprise. The united and earnest efforts of the people have done much during the past five years to advance the best interests of their city. During this time a number of large manufacturing plants have appreciated the advantages of Albany as an industrial center, and have located at this point. Among these large plants can be mentioned the Albany iron works, which manufactures farm and mill machinery on a large scale. Most of the product of this factory finds a ready sale in the country tributary to Albany, and large shipments of machinery are regularly made to Portland. The Red Crown flouring mill, located here, is one of the leading plants of the kind in the valley. This mill has a daily capacity of 150 barrels, and the brand of flour manufactured is among the highest in the market. The Albany woolen mills consume 350,000 pounds of wool annually, and they furnish steady employment to

50 men and women. The larger part of the output of these mills is shipped direct to New York, where it is readily sold in direct competition with the products of the largest Eastern mills. Albany has also a large planing mill, a brewery, the latter of which has a daily capacity of 30 barrels, a furniture factory, an ice plant, a foundry and granite works of considerable magnitude.

Albany is practically the clearing-house and trading center for all the smaller towns of Linn county. The city contains four large banking houses, all of which are on the strongest of financial footings, and each of these banks occupies an elegant building of its own. The average deposits carried by each of these banks is $300,000, which can be taken as an evidence of the healthy condition of the place.

The First National Bank is the oldest bank in Albany, having been incorporated in 1883. Its capital stock is $80,000, and its surplus and undivided profits now amount to $40,000. The officers of the First National are: L. Flinn, president; S. E. Young, vice-president; E. W. Langdon, cashier, and E. M. Horton, assistant cashier.

Albany has already attained some prominence as a seat of learning. During 1888 an imposing public school building was erected here at a cost of $20,000. This building and grounds occupy a block in the central part of the city. The building contains 10 rooms and a basement, and is finished throughout in modern style. A graded system, including high school course, is adopted and the school is conducted at the expense of the state and county school fund. The Albany College, an institution of higher learning, was founded under the auspices of the Presbyterian church in 1867. This college maintains a higher course of mental and moral training, and it now numbers among its alumni some of the most prominent men of the state. The average number of scholars in attendance at the college during the past year was 200. A Catholic school is also supported here. This latter school provides for an academic course, and it is well patronized. The school building is large and well arranged and the surrounding grounds are well kept. The total number of children of school age in Albany district now exceeds 1,000.



STEEL BRIDGE ACROSS THE WILLAMETTE RIVER, ALBANY.

Ten neat church edifices are claimed by Albany. These belong to the denominations of the Presbyterian, Baptist, two Methodist, Congregational, Christian, Episcopal, Evangelical and Catholic faiths.

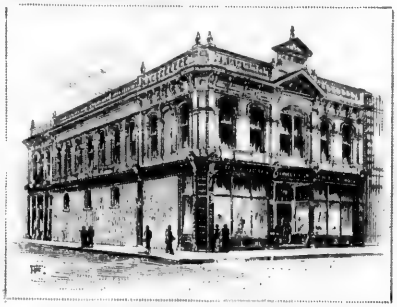
Albany is fully abreast of the times in the matter of public improvements. A free steel passenger and wagon bridge spans the Willamette river at this point, thus making directly tributary to the city an immense fertile district to the west. This bridge was constructed at a cost of $100,000. A well-equipped fire department, with three volunteer fire companies, is maintained here, as well as an efficient police force. The city has an excellent arc and incandescent electric light plant. The city's health is protected by a perfect system of sewerage, and it has a good system of water works. One of the most prominent features of the town is the immense water power developed at this point. Twelve miles southeast of the city a canal taps the Santiam river, and this canal reaches Albany by an almost direct course. Near the city the canal is divided into two branches, one of which empties into the Calipooia

river, the other emptying into the Willamette. On the former canal a fall of 32 feet is afforded here for manufacturing purposes, and where the other canal pours its waters into the Willamette river, a fall of 36 feet is afforded. These two main branches are subdivided and are led through the manufacturing districts of the city. Although the large number of factories now located here avail themselves of the use of this power sufficient reserve power is afforded by this canal to run many additional manufacturing plants.

Albany supports two daily newspapers, *The Democrat* and *The Herald*, and also one weekly paper, *The Telescope*. The city contains a handsome brick opera house with a seating capacity of 1,000. A free reading room is also maintained here. The city has three large hotels and four well-stocked livery stables. During the past five years Albany has made a very satisfactory growth and if the earnestness and continued effort of the people here is as important a factor in the future growth of the city as it has been in the past, the city will always be able to lay claim to being one of the largest and most prominent points of Western Oregon.

SAMUEL E. YOUNG.—The city of Albany boasts of having not only the largest mercantile establishment in Linn county, but also one of the largest in the Willamette valley outside of Portland. The house referred to is that of Samuel E. Young, which consists of four large departments, viz: boot and shoe, dry goods, grocery and carpet. The building shown by the accompanying illustration is a two-story brick with basement, having a frontage of 48 by 100 feet, and situated on the most prominent corner of Albany's business street. The store was first established in 1866 under the firm name of J. Barrows & Co., but in 1876 Mr. Young became the sole proprietor.

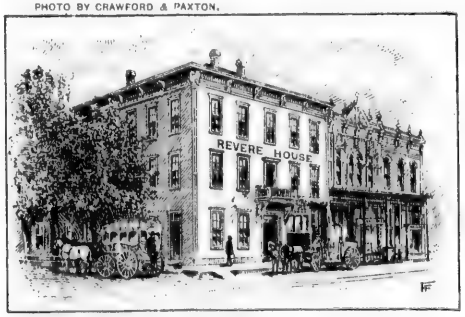
PHOTO BY CRAWFORD & PAXTON.



STORE, SAMUEL E. YOUNG, ALBANY.

Mr. Young is an Oregon pioneer, having crossed the plains in 1852, and soon after that time he settled in Albany, where he has since been actively engaged in mercantile business. He has been prominently identified with all interests that have conduced to make Albany the shipping and commercial center that it is today. Mr. Young has ever proved himself to be one of Albany's most valuable citizens. In addition to his connection with many local interests, he is also a director and vice-president of the First National Bank of Albany.

PHOTO BY CRAWFORD & PAXTON.

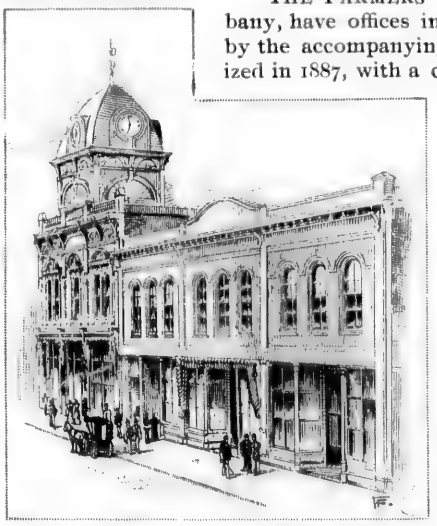


REVERE HOUSE, ALBANY.

THE REVERE HOUSE, of which Mr. Chas. Pfeiffer is proprietor, is invariably spoken of by commercial traveling men, who are accepted judges, as the best hostelry in Albany and this portion of the Willamette valley. Mr. Pfeiffer erected the Revere House in 1877, and he, being an expe-

rienced hotel man, he omitted none of the conveniences that are now found in every thoroughly modern hotel. The table service and cuisine are unexcelled anywhere at any price, in the state. Mr. Pfeiffer lends his personal supervision to everything connected with the dining room. The sleeping apartments of the hotel are neat, clean and comfortably furnished. Free sample rooms fronting on the street are at the disposal of commercial men. A free 'bus meets all north and south-bound trains. The Revere House, shown by the accompanying illustration, is centrally located, and is best known by its genial and courteous proprietor, who spares no efforts to provide for the comfort of his guests.

PHOTO. BY CRAWFORD & PAXTON.



FARMERS & MERCHANTS INSURANCE CO.'S OFFICES, ALBANY.

THE FARMERS & MERCHANTS INSURANCE CO., of Albany, have offices in a handsome brick structure, as shown by the accompanying illustration. This company was organized in 1887, with a capital stock of $100,000, but their business has since increased to such proportions, because of the well merited confidence of a growing patronage, that it has been necessary to increase the capital stock to $300,000. Aside from the solid financial standing of this popular company throughout the state, the character and responsibility of the gentlemen at the head of the company is a weighty argument for those seeking the strongest protection.

The officers of the Farmers & Merchants Insurance Company are: W. F. Read, president; Geo. F. Simpson, vice-president; J. O. Writsman, secretary; J. L. Cowan, treasurer, and E. A. Milner, cashier.

Linn County, Oregon.—Linn county, of which Albany is the judicial seat, is distinctively an agricultural section, although some timber is found in the county along the eastern border of the Cascade range of mountains. The residents of this county are especially favored in the matter of transportation facilities enjoyed. The Oregon Pacific railroad crosses the county from east to west, while the Southern Pacific Company's main line of road connecting San Francisco with Portland runs north and south through the county. A branch of the Southern Pacific system also runs from Albany to Lebanon, a distance of 13 miles and the Woodburn-Springfield branch of the same system runs north and south through the valley at a point some little distance east of the main line of road. In addition to the advantages of rail communication Linn county has the benefit of the steamboat lines operating on the Willamette river south from Portland through the Willamette valley.

Linn county is today the third county in the state in population, and it is one of the richest counties of Western Oregon. The population of the county is now about 17,000. The county contains about 1,500,000 acres of land, or 2,400 square miles.

The eastern part of the county is formed by the Cascade range of mountains, a district chiefly valuable for grazing and for the timber which covers these hilly sections. The timber here consists of fir, ash, cedar, maple, alder and oak. The western portion of the county supports about four-fifths of the entire population of the county. The land of the county fit for occupancy has now all been taken up, but much of it can yet be purchased at prices ranging from $12 to $50 an acre, and the lands that are offered at these prices are well adapted for agricultural purposes.

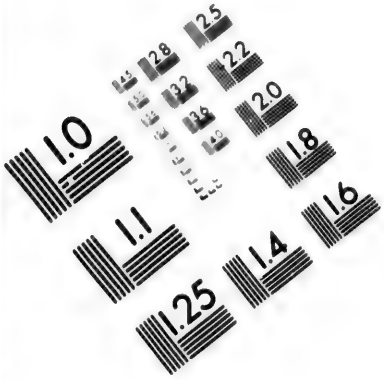
Wheat is the staple product of Linn county. Sufficient attention has been paid to fruit culture, the growing of vegetables, hops, etc., and to sheep and cattle raising as well as dairying, to prove that these pursuits in this part of the state yield larger returns than the growing of the single crop, wheat. The farmers of Linn county who are turning their attention solely to fruit and vegetable raising are reaping small fortunes. The soil of the best lands of the county is of a mellow loam and if properly cultivated the return from a single acre of this land in a season is as high as $100 to $300. Linn county is one of the choicest spots of Western Oregon and immigrants will find here one of the most attractive sections of the coast.

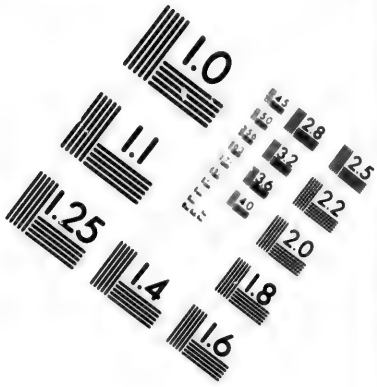
Lebanon, Oregon.—Located in Linn county, near the foothills of the Cascade mountains and 13 miles southeast of Albany, is situated the town of Lebanon. The site of the town is an attractive one, and the surrounding country is highly fertile. Lebanon is connected with Albany by a branch from the Southern Pacific Company's main line. This branch intersects the Springfield branch of the same company at Lebanon Junction, four miles west of Lebanon, and the latter town is the terminus of the line. Excellent connection is made from Lebanon with points north and south in the Willamette valley by means of the Lebanon branch of the Southern Pacific with the trains of the through line, or by the same branch through connections at Lebanon Junction with the trains of the Woodburn-Springfield line.

Lebanon is located near the center of Linn county, and is the trading point of a rich tributary farming belt. Wheat, oats, hops, fruit, fine stock and sheep are the principal productions of this section. Owing to the many fine streams of running water found in this district, fruit raising and dairying are followed with most successful results, and the entire country within a radius of several miles of this promising young town is an ideal farming belt.

Lebanon was incorporated as a city in 1891. Its present population is about 1,000. Manufacturing is now carried on here to a considerable extent and the manufacturing industries of the town are constantly increasing. Three years ago, through the inducements of a liberal bonus promised by the people here, a paper mill was established at this point. This mill is now running both day and night. It employs constantly about 25 men, and it is one of the leading industrial institutions of the Willamette valley. The abundance and cheapness of straw on which the mill is run and the cheapness of reaching a market with the product of the mill, have been the important factors in the success of the plant. The present capacity of the mill is five tons of paper per day. The entire machinery of the plant is of the latest and most improved pattern. This industry is a source of profit to the company operating the plant, and it is the most important industry in furthering the growth of the town in which it is located. In addition to the paper mill, Lebanon also claims a modern flouring mill with a daily capacity of 100 barrels, two planing mills and a foundry.

The location of Lebanon on the South Santiam river has proved of great commercial value to the town. A stock company composed of local men have completed during





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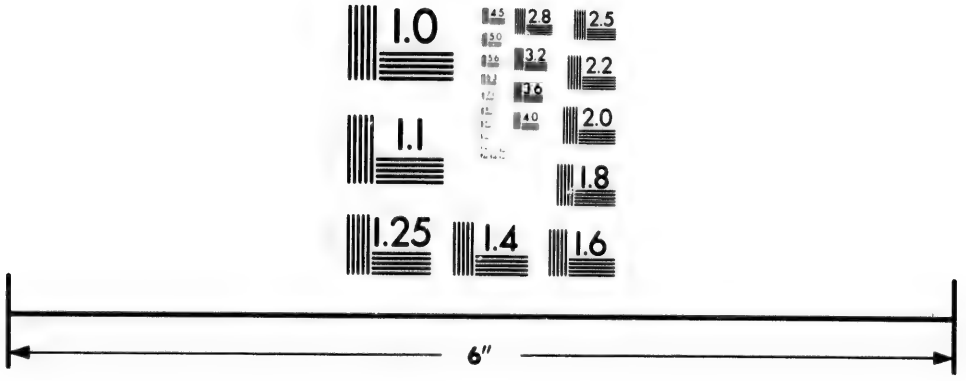

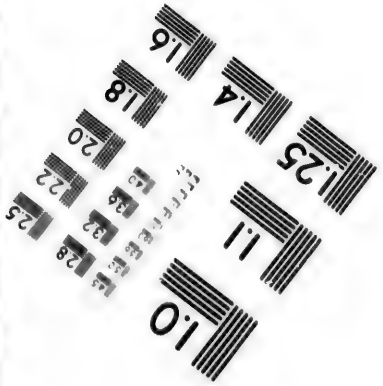

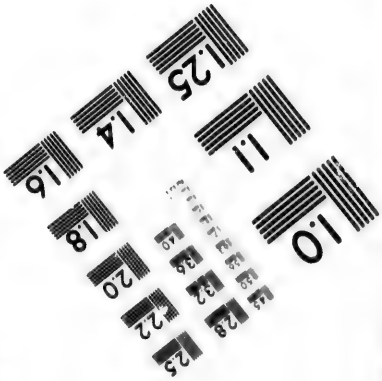

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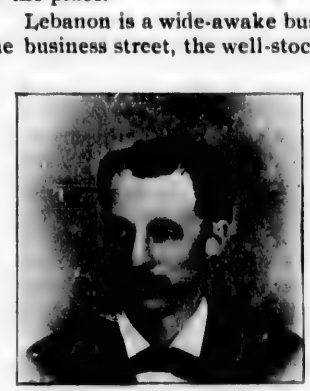
the past two years a canal four miles in length which runs directly through the town. The water for this canal is taken from the Santiam river four miles distant from Lebanon, and a fall of from 19 to 25 feet is obtained for manufacturing purposes at the town. Sufficient power is obtained from this source to run all of the factories at Lebanon. The efficient arc and incandescent lighting plant of the town is run from power furnished by this canal, and the water used in Lebanon is also taken from this source.

Good wagon roads lead out from Lebanon in all directions. Sweet Home, an important trading point 20 miles distant, is reached by easy drives from Lebanon, as is also Sodaville, at which latter point are located the justly celebrated mineral springs which contain medicinal properties of great value. The trade of these outlying towns naturally comes to Lebanon, and the development of this latter place for the past few years has been rapid and of a most substantial character.

Santiam Academy, one of the oldest institutions of learning in the state, is located at Lebanon. The average attendance of this school is about 60 students. The courses of study at the Santiam Academy are well outlined, and if diligently followed will fit the student for entrance to the freshman class of any of the best literary colleges of the United States. The public school building of the town was recently erected at a cost of $6,000, and, as shown by the illustration published in connection with the present article, it is a handsome and commodious structure for school purposes. Four teachers are employed in the public schools here, and the average daily attendance of scholars is about 225.

The moral and religious sentiment of the people of Lebanon is high, if six well-organized churches located here exert the influence that would naturally be expected of religious organizations, strong in numbers and ably led. The denominations represented at Lebanon are the Presbyterian, two Methodist, Baptist and the Christian. All of these bodies, except that of the Christian denomination, worship in buildings of their own. Lebanon supports two well edited weekly papers, *The Express* and *The Advance*. The traveling public finds accommodation in a good hotel here, and every facility for riding or driving is afforded in the two livery stables of the place.

Lebanon is a wide-awake business place. The handsome buildings which line the business street, the well-stocked stores, and the general activity of the citizens, attest the prosperity of the town at the present writing. The conditions at Lebanon are favorable for the same future substantial advancement in the prosperity of the town which has been noted during the past few years, and the air of confidence which the people show in the future of Lebanon will tend to strengthen this growth.



W. C. PETERSON, LEBANON.

The prices of farm lands in the immediate vicinity of Lebanon are moderate, when the advantages of location are considered. Information on this subject can be obtained from Mr. Walter C. Peterson, whose residence has been in Linn county and Lebanon since boyhood, and whose father was one of Oregon's pioneers. Mr. Peterson, whose portrait is published in connection with this article,

quotes values of land located within one mile of the corporate limits of Lebanon at from $25 to $75 per acre. Fine stock farms can be purchased within a distance of three miles of Lebanon at $12.50 per acre. Mr. Peterson's prominence in the community in which he has so long resided, entitles him to the confidence of those who may desire information of Lebanon, or of the section of which the town is the principal trading center.

One of the prominent men of Lebanon is Samuel M. Garland, the present efficient city attorney. Mr. Garland is thoroughly familiar with prices of town property at Lebanon, and he has also watched carefully for a number of years past land values in the farming district tributary.

Stayton, Oregon.—Stayton is in Marion county, about 60 miles south of Portland. It is four miles east of West Stayton, the nearest station on the Woodburn-Springfield branch of the Southern Pacific railroad. Stages make connections with all trains over this road at West Stayton for Stayton direct, and daily stages run from the latter place to Aumsville, a point also located on the railroad line six miles distant. The line of the Oregon Pacific Railroad Company also passes within 1½ miles of Stayton, the nearest point on the latter road to the town being the station of Kings.

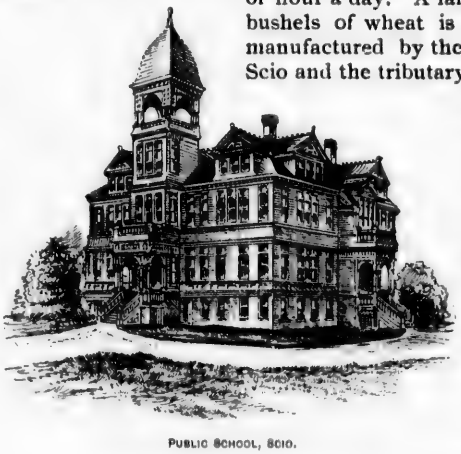
The present population of Stayton is about 500. It is situated on the banks of the Santiam river. Many years ago a canal three-fourths of a mile in length, connecting the two branches of the Santiam river at this point, was dug. This canal passes directly through the present town of Stayton. It furnishes power for running the factory wheels of the town to-day, and it has sufficient reserve power for running a large number of additional wheels. Stayton's manufacturing industries at the present writing consist of a roller flouring mill with a capacity of 75 barrels a day, a sawmill and furniture factory combined, and a rawhide chair factory. The mercantile interests of the town are represented by a number of stores which carry large stocks of goods, and the place is generally prosperous.

The public schools of Stayton are conducted in a building recently erected. The structure used for school purposes contains four rooms. About 125 pupils are regularly in attendance at these schools, and the public school system is in charge of four teachers. The Methodist, Baptist and Christian denominations hold regular meetings in Stayton, the Baptists and Christians owning buildings of their own. *The Times*, a weekly paper, is published at this point. Two hotels and one livery stable furnish ample accommodations for the traveling public. The country immediately around Stayton is especially adapted to the cultivation of fruit. Much attention has been paid here of late years to growing strawberries—a crop that yields abundantly in this section—and the fruit raised is of the finest quality. In addition to fruit culture, the country tributary to Stayton has all the diversified wealth of forest and soil, and it is a section capable of being developed into one of the richest farming distric of the state.

Scio, Oregon.—Situated between the forks of the Santiam river, 18 miles east of Albany and 72 miles south of Portland is the town of Scio. Thomas creek, which furnishes an excellent water power at this point, divides the town and finds an outlet in the Santiam river. A short line of railway, two and one-half miles in length, connects Scio with the Woodburn-Springfield branch of the Southern Pacific at West Scio. Scio is but a short distance north of the Oregon Pacific railroad and

on the completion of the latter road to an eastern connection the town will be practically on the direct line of a system of competing roads connecting with all points in the United States, east, west, north and south.

Scio is an incorporated town and has a population of about 550. It is supported by a rich agricultural district which produces in many instances 50 bushels of wheat to the acre, while oats, flax, barley and all the grasses yield as large crops here as are produced anywhere in the valley. The area of the county lying between the forks of the Santiam river is greater than that of some of the smaller Eastern States, and Scio is the commercial center for all of this vast expanse of territory. The water supply of this section is unlimited, as the three rivers and all their tributaries which flow through this part of the state find their sources in the foothills of the Cascade Mountains where they are fed by perennial snows. An excellent water power obtained from an artificial arm of Thomas creek runs the Scio Roller Mills, the planing mill and the efficient electric light plant of the town. The roller mill at this point is one of the best flouring mills in the county. Its capacity is 125 barrels of flour a day. A large warehouse capable of storing 80,000 bushels of wheat is connected with this mill. The flour manufactured by the Scio Roller Mills finds a large sale in Scio and the tributary country, and large quantities are regularly shipped to Portland. The people of Scio take something of a pardonable pride in their perfect system of water works. Hydrants have been placed at every street crossing of the town, with fire hose connection. This, with the efficient volunteer fire department, insures absolute protection to Scio against a conflagration. The streets, business houses and dwellings of the town are lighted by electricity. Both the arc and incandescent systems of lighting are used. The water works and electric light plants at Scio are owned and operated by private individuals.



PUBLIC SCHOOL, SCIO.

A local brickyard has already supplied the brick used in the erection of four brick blocks on Scio's main thoroughfare. A number of business houses at Scio carry very large stocks and do a big trade in the tributary section. The general merchandise stores of Hibler, Shore and Holdredge carry a stock of goods valued at $15,000, and in addition to their big city trade they enjoy a large country patronage. S. M. Daniel also carries a large stock of merchandise, the value of his stock approximating $10,000. Mr. Daniel enjoys a large trade both from city and country customers. The large furniture and carpet store of W. H. Ramsey does a paying business—a business that is constantly increasing in volume, owing to the rapid growth of population both in the town and in the country immediately tributary.

The Bank of Scio, the financial institution of the town, has a capital stock of $23,500. Its officers are, I. J. Munkers, president; J. W. Gaines, vice-president, and A. J. Johnson, cashier. This bank is on the strongest of financial footings and it

enjoys the complete confidence of the people of the community in which it is located.

Scio is abreast of other towns of equal population in educational advantages afforded its youth. An eight-room brick school building was completed in the town during the past year at a cost of $12,000. It is an attractive piece of architecture and is perfectly adapted to school purposes. Four teachers are employed in the public schools here, and the average number of scholars in attendance is 130. The religious organizations at Scio are represented by the Baptist, Presbyterian, Christian and Methodist denominations. The Christian and Methodist organizations own church buildings of their own. A city hall, with a seating capacity of 150 people, affords good accommodations for gatherings of a public nature. *The Press*, a weekly newspaper, handles the town and country news at Scio in a creditable manner. The town supports one hotel and has two livery stables.

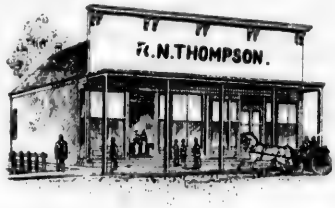
Land in the vicinity of Scio is relatively cheap. Improved farms within one-half mile of the town limits sell at about $40 an acre, and a few miles out of town good farms can be purchased at as low a figure as $10 an acre. Fuller information of the rich lands in the district tributary to Scio can be obtained from Mr. R. Shelton of this town, who is thoroughly posted on farm values in this section. All letters addressed to R. Shelton, Scio, Oregon, will receive prompt attention.

Brownsville, Oregon.—At the western extremity of one of the arms of the Willamette valley, which merges into the foothills of the Cascade range of mountains, is located the prosperous little city of Brownsville. The place is within the limits of Linn county, and the site which the town occupies is one of the most picturesque points of Western Oregon. Two buttes are conspicuous features of interest to the north and south of the town limits of Brownsville, while on the east rise the rugged outlines of the lofty Cascade range of mountains. The Calipooia river, a mountain stream, which at all seasons carries a good volume of water, flows by the town, and the banks of this stream are the scene of considerable industrial activity.

Brownsville was first laid out as a town in 1850. It is today one of the most important manufacturing points in the Willamette valley. Its present population is about 1,000. All-rail communication is afforded with Portland, 95 miles north of Brownsville, by means of the Woodburn-Springfield branch of the Southern Pacific and the main line of the same company through connection with Woodburn, 60 miles north of Brownsville, and with all points south in the valley, through connection with the Lebanon branch of the Southern Pacific at Lebanon Junction, 13 miles south, the latter line forming a junction with the main line of the same company at Albany.

Brownsville is located in the midst of a rich farming and timber district. It occupies a site perfectly adapted for the establishment of manufacturing industries on a large scale, and it contains an enterprising population. The Eagle woolen mills, among the few great woolen mills of the coast, is located at Brownsville. A lengthy description of this most important industry is published in connection with the present article. In addition to the woolen mills, Brownsville is also the seat of a patent roller flouring mill, with a daily capacity of 50 barrels and a saw and planing mill, with equipments for turning out sash and doors, and a tannery. An immense water power at this point, which is also mentioned at length elsewhere in the present article, runs all of the factories mentioned above, and there is sufficient reserve power in these falls to run all the factories of the Willamette valley.

While the country in the immediate vicinity of Brownsville is perhaps more undulating and hilly than are other parts of the Willamette valley, it is no less fertile than are any of the best sections of this great agricultural and fruit belt. In addition to its special adaptability to the growing of cereals of all kinds, fruits and vegetables, this hilly land is especially adapted to the raising of fine horses, cattle and sheep. Wool-growers in this section find exceptional opportunities for disposing of their wool crop in the large woolen mills located at Brownsville, and wool here always bring good prices.



GEN'L MERCHANDISE STORE, R. N. THOMPSON, BROWNSVILLE

The general merchandise store of R. N. Thompson, which was established in 1880, will serve to give an idea of the volume of business transacted here. Mr. Thompson's store, as shown by the accompanying illustration, has a double front, and occupies a prominent corner, 44x90 feet in dimensions. The value of the stock carried is between $15,000 and $20,000. Besides an immense local trade, Mr. Thompson enjoys a large patronage from the farmers, a trade that reaches a section of rich country within a radius of 20 miles distance of Brownsville.

In Brownsville, on the opposite side of the Calipooia river from which the large business establishment mentioned above is located, is the mammoth general merchandise store of G. C. Cooley & Co., of which Messrs. G. C. Cooley, W. C. Cooley and J. D. Irvine are proprietors. This firm carries a stock valued at from $15,000 to $20,000, and enjoys an immense local and country trade. The Bank of Brownsville is a strong financial institution of the city. The officers of the bank are: J. M. Moyer, president; W. R. Kirk, vice-president, and L. L. Say, cashier. The capital stock of the bank is $30,000.

Brownsville is not behind any other point of the valley in an efficient system of public instruction. A handsome new four-room school building has recently been erected at this point at a cost of about $7,500. An older building, with two rooms, is still occupied here for school purposes. The number of teachers employed in the public schools here is five, and the average daily attendance of scholars is 250. The schools are graded, and correct rules of discipline are enforced. The city supports one weekly newspaper, *The Times*, and a good public library is maintained. Six church organizations are supported at Brownsville, and some of these occupy very handsome church edifices. The denominations include two Presbyterian, two Methodist, one Baptist, and the Christian. A good opera house, with a seating capacity of 500, is located at this point. The town has two hotels, and good livery accommodations are afforded in one stable. With every advantage of an unexcelled water-power, with an abundance of the finest timber near at hand, with the richest of farming districts tributary, Brownsville enjoys every facility for making steady and solid advancement in the future. It might be assumed that good farming lands in the vicinity of as rich a town as Brownsville, and exceptionally located, would command very high prices. On the contrary, choice acre property can be bought here, according to a statement by Mr. O. P. Coshow, whose long residence in Brownsville, and whose familiarity with land values are well known, for from $10 to $50 and $100 per acre, the value of this land varying according to improvements made on it and proximity to town.

THE EAGLE WOOLEN MILLS.—The Eagle Woolen Mills, at Brownsville, have been in operation for more than 25 years. Since the present company acquired ownership, five years ago, the sound of looms and spinning machines has been uninterrupted, except on Sundays, for the mills run steadily, both day and night. New machinery has been added as required, from time to time, since the building of the mills, so that the present equipment is almost all modern and in first-class condition. A dynamo, with generating power sufficient to furnish electric lights for the entire woolen mill plant, has recently been added.

The mills may be designated as two-set, but with four-set capacity, which is explained by the statement that in operating the spinning and carding department both day and night, and the other machinery having double their capacity, a four-set mill is the result.

An immense water power is derived from the Calipooia river, across which, four miles distant, a dam has been built which turns almost the entire river into a race conducting the water to the mills in an inexhaustible supply. This water also furnishes the power for the Brownsville Flouring Mill, which is also owned by the woolen mill company. The grinding capacity of this mill is 50 barrels per day. It has the new roller process and manufactures three grades of flour, which have attained a reputation for excellence.

The Eagle Woolen mills manufacture into the finest fabrics 300,000 pounds of wool every year. All of this wool is grown in the state of Oregon. Linn county, in which the mills are located, is especially adapted for wool growing, and a large proportion of the supply comes from this source. Thousands of cords of wood are also required for the engines in generating heat and steam for the cleansing, bleaching dyeing and drying departments. It is thus seen that, outside of the mills proper, employment is afforded to a number of men. The mills furnish direct employment to more than 60 men, women and boys, and the monthly pay roll of the company amounts to $2,200. The operatives all have their homes in Brownsville and, in most instances, in near proximity to the mill. The general air of neatness and healthfulness pervading this section of the city is apparent at all times.

The Eagle Woolen Mills Company have a large wholesale and retail store in Portland, at 164 and 166 Second street, to which the entire product of the mill is shipped as soon as manufactured. From two to four shipments are made every week. In connection with the Portland store is an order, cutting and fitting department. A stock of $150,000 value, consisting of the finest grades of blankets, flannels, cassimeres and tweeds is constantly kept on hand, from which to make selections. The latest designs in pattern are closely followed, and it is the boast of the manufacturers that every piece of cloth bearing the stamp, "The Eagle Woolen Mills," is guaranteed all wool.

The officers of the Eagle Woolen Mills Company are: W. R. Kirk, president; I. D. Boyer, secretary, and J. M. Jaeger, superintendent, all of whom reside in Brownsville. Mr. Jaeger has had 30 years' practical experience as a woolen manufacturer. The directors of the company are W. R. Kirk, J. M. Jaeger, J. J. White, John Brown and Hugh Fields.

Silverton, Oregon.—Six years ago the present prosperous town of Silverton was a mere hamlet, enjoying but little trade, and classed among the insignificant points of the state. Today the population of the town is no less than 900, it has the air and bustle of a trading and banking center of prominence, and Silverton is now ranked among the most progressive towns of Western Oregon.

Silverton was incorporated in 1885. Soon after the act of incorporation was passed, the spirit of progress and enterprise pervaded the community, and this progressive spirit on the part of the inhabitants has resulted in building up at this point a wide-awake little city that is a model of cleanliness and beauty. During the past few years Silverton has continued to make substantial and steady growth, nor has this increase in population and wealth yet subsided. On the sides of the gently sloping hills which have the appearance of surrounding the city, are situated many handsome residences, some of which are almost palatial in the handsome appearance of their superstructure, while the majority of the private dwellings of the residence district are good. New buildings are being erected in different parts of the city, and the vacant lots within the corporate limits are rapidly being occupied by a good class of houses. The main business thoroughfare of Silverton, during the working days of the week, has a decided metropolitan appearance. Imposing blocks, constructed of brick manufactured from clay found in inexhaustible quantities in the immediate vicinity of the city, stand on the prominent corners of the business street. A number of very fine business blocks have been erected here during the year, and other equally as substantial structures are already planned and will be built during 1894.

STREET SCENE, SILVERTON.

Silverton occupies a site in one of the most productive portions of Marion county. It is 45 miles south of Portland and 14 miles east of the state capital at Salem. It is reached by the Woodburn-Springfield branch of the Southern Pacific system, the branch connecting with the main line at Woodburn, 10 miles distant. An efficient train service has been established by the Southern Pacific company, which gives Silverton the advantage of two trains each way daily between this point and Portland. One of these trains runs north and south between the junction with the main line at Woodburn (through Silverton) and Natron, 93 miles south of Woodburn, and the other train makes a daily round-trip between Woodburn and Silverton, making close connection at the former place with the trains on the main line. Silverton thus enjoys the best of advantages for reaching all parts of the Willamette valley, and this efficient train service, both north and south, has done much to encourage the growth of the city. In addition to the advantages of rail connection, Silverton also supports a stage line which makes daily connection with Salem.

It has been the aim of the railroad company to extend every advantage to the merchants of Silverton in the way of transportation facilities. A side-track extends from the main line of the railroad at this point along the principal street to the flouring mills of the Oregon Milling Company. These mills are among the largest in the state. The capacity of the plant is 300 barrels of flour a day. The total output of these mills, for 1892, which was considered a short season, was 42,000 barrels. The celebrated brands of flour, "Royal" and "Pioneer," manufactured by this company, are among the best-known brands of the coast, and great quantities of this flour are now regularly shipped to all parts of the world.

Silverton boasts of an excellent water power, obtained by means of a short canal from Silver creek, which flows by the edge of the town. This power is more than sufficient for operating the large flouring mills here, and it also runs the local sawmill, sash and door factory, and an efficient arc and incandescent electric light plant. During the past year a most complete system of water works has been completed at Silverton. The water for domestic use in the city is pumped from the river direct into a large reservoir which is sufficiently elevated to afford ample pressure. Water mains are now laid along all the principal streets. The pressure in the city's mains, together with an efficient volunteer fire department which is maintained here, affords perfect protection against disastrous holocausts, and there is no danger of the place succumbing to the ravages of the fiery element. Both the electric light and the water-works plants are owned by private individuals. In addition to the manufacturing plants of Silverton enumerated above, are two very important brick-making plants. All the brick used in the construction of the fine business blocks of the city were manufactured in the local yards, and in addition to the heavy local demand, these yards regularly ship large quantities of their product to neighboring points in the valley.

PHOTO, BY W. L. JONES.

PUBLIC SCHOOL, SILVERTON.

The finest brick block in Silverton, at the present writing, is that of Messrs. Adolf Wolf & Son, an illustration of which is published in connection with the present article. This building was erected two years ago, at a cost of $10,000. The first floor is used as a general merchandise store, while the second floor is devoted to office purposes. The basement has a cement floor, and is used principally for storage purposes. In the basement is located the furnace which supplies the heat for the entire building. Mr. Adolf Wolf and his son, Mr. J. C. Wolf, have now been in business in Silverton for 10 years past. This firm conducts, at Silverton, one of the best-appointed general merchandise stores in the state, and they carry constantly a stock valued at from $25,000 to $30,000.

ADOLF WOLF & SON'S GEN'L MERCHANDISE STORE, SILVERTON

BANK, COOLIDGE & MCCLAINE, SILVERTON.

The banking house of Messrs. Coolidge & McClaine, as shown by the accompanying illustration, is a handsome brick structure, which was erected during the past summer. The bank itself is one of the solid financial institutions of the Willamette valley. It has a capital stock of $25,000, and a surplus of equal amount. Its officers are Alfred Coolidge, president; Fielding McClaine, vice-president, and M. J. Adams, cashier.

The firm of Cusiter & Davenport also does a large general merchandise business at Silverton. Mr. George Cusiter, whose portrait is published in connection with the present article, furnishes a typical example of the possibilities that await the young man of push and enterprise in the Western country. Mr. Cusiter is but 31 years of age, but he is now ranked among the most successful business men of the Willamette valley, and he has attained the highest gift within the reach of the people of his adopted city, that of mayor of Silverton. Mr. Cusiter makes a very efficient executive officer and he enjoys the confidence of the entire community.

GEO. CUSITER, SILVERTON.

All the various business pursuits and professions are well represented at Silverton, and the volume of business annually transacted here is large and is constantly increasing.

Silverton ranks high in the matter of educational advantages afforded its youth. The fine city public school is a pretentious and handsome piece of architecture, as shown by the illustration accompanying this article. It contains six rooms and its erection involved an outlay of $7,000. The building occupies a full block of ground in the central part of the city and is perfect in all its appointments. The grades of the public schools are well defined and the public school system is ably managed. Five experienced teachers are employed in the public schools here and the daily enrollment of scholars in attendance during the past year reached 225.

But three church organizations are maintained in Silverton. These include the Presbyterian, Methodist and Christian denominations. Each of these organizations owns its own church building, and each is strong in membership. *The Tribune*, a weekly paper, is published at Silverton, and it is well supported. A good hall with a seating capacity of 300, affords a convenient place here for public entertainments. Good accommodations are afforded the traveling public in three well conducted hotels. The Silverton livery stable, of which J. H. Moser is proprietor, is well equipped with horses and vehicles. Mr. Moser pays special attention to meeting the demands of the traveling public for riding and driving, and he has some of the best stock in the country. In addition to the establishment presided over by Mr. Moser, Silverton also supports another stable.

Silverton's main source of support is the exceptionally fertile and highly productive farming section immediately tributary. While the soil of this land is especially adapted to the raising of fruit, including prunes and strawberries particularly, hop culture and the raising of grain claim a large part of the attention of the farmers of this part of the state. Dairying and stock raising here have also proved most remunerative callings. Considering the proximity of Silverton to Portland, and the exceptional facilities for shipping enjoyed by the farmers here, land in the vicinity of Silverton is not held at high valuations. From Mr. G. A. Webb, a reliable real estate agent, who has resided at Silverton for eight years past, it is learned that the prices of improved land three to six miles distant from the city, today vary from $20 to $50 an acre. Within one mile of the corporate limits of the city choice lands

can be bought for from $40 to $65 an acre. Mr. Webb is ready at all times to furnish reliable information, either of Silverton or of the rich section of country tributary.

Silverton is a thriving place, made up of an enterprising population. The people here are at all times alive to the advantages of location which the city enjoys, and they are disposed to make the best of the opportunities afforded them here for advancement. The people of Silverton have strong hopes of making their town one of the principal commercial centers of the Willamette valley, and the advancement the place has made during the past few years augurs much for a continued growth in population and wealth in the future.

Mt. Angel, Oregon.—The town of Mt. Angel was incorporated by an act of the last legislature. It now has a population of about 250, and is the seat of two of the leading Catholic institutions of learning on the coast, the Mt. Angel Seminary and College and the Queen of Angels Academy. The parochial schools here have a daily attendance of about 60 pupils, who are instructed by the Benedictine Sisters of the Queen of Angels Academy. The public school system of the town is good, the average number of scholars in attendance at the public schools being about 30.

Mt. Angel is 40 miles south of Portland on the line of the Woodburn-Springfield branch of the Southern Pacific, six miles from the main line at Woodburn, and is 14 miles southeast of Salem. Four passenger trains pass this point daily. The town is making steady and constant advancement, both by reason of the exceptional educational advantages afforded here and also by its location in a rich and highly productive country. A large grain warehouse with a storage capacity of 75,000 bushels, is located at Mt. Angel, and the town also boasts of a keg factory, the output of which finds a sale principally among the large breweries of Salem, Albany and Portland. There is but one church building in the town at the present time, that of the Catholics which is a recently erected structure.

The Mt. Angel hotel, of which Mr. B. Oswald is owner and manager, is a handsome structure, as is shown by the accompanying illustration. The hotel building contains 11 neatly furnished rooms, and the rates charged are from $1 to $1.50 per day. Mr. Oswald has made the Mt. Angel hotel a popular hostelry with the traveling public, and he enjoys a constantly increasing patronage. Mt. Angel supports a single livery stable, which furnishes ample accommodation to the people who visit this point.

MT. ANGEL HOTEL, MT. ANGEL.

From the top of Mt. Angel, located but a short distance from the town of the same name, is obtained a magnificent view of a wide stretch of the best part of the Willamette valley, and also of the snow-capped peaks of the lofty Cascades, in both Oregon and Washington. The rugged chain of the Coast Range of mountains on the west are also seen to excellent advantage from this point, as are the Waldo Hills and the historic Mary's Peak on the south. Mt. Angel is not a town of a large population, but it is a prosperous settlement located in a highly attractive and rich section of country, and as a place of residence it is one of the most charming points of the Willamette valley.

MT. ANGEL SEMINARY AND COLLEGE.—Situated at the foot of Mt. Angel, a gently sloping hill containing an area of about 800 acres, is Mt. Angel Seminary and College, an educational institution conducted by the Benedictine fathers. The elevation known as Mt. Angel, rises to a height of 295 feet, and from the summit of this elevation a commanding view is obtained of the surrounding country for miles distant.

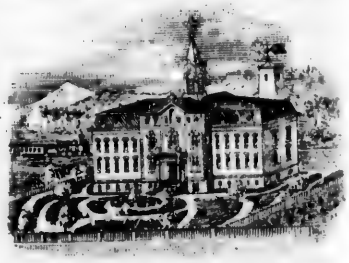
The monastery grounds comprise an area of 800 acres, and are crossed by the Woodburn-Springfield branch of the Southern Pacific. The station of this railroad line is located within one mile of the monastery. The college building, shown by the accompanying illustration, is a three-story structure, designed and arranged according to the most modern plans for such an institution. The monastery, seminary, church and other smaller buildings were destroyed by fire in May, 1892. It is expected that these buildings will be replaced with better structures during the coming year.

MT. ANGEL SEMINARY AND COLLEGE, MT. ANGEL.

The institution is divided into three departments. These are for students of philosophy and theology, for those who desire to study for the Catholic priesthood and for those who may wish to prepare themselves for any other profession. The religion of the institution is Roman Catholic, but students of other beliefs are admitted, the only requirement of scholars being that they be present at the common religious exercises. The rules and regulations of the school have been carefully drafted, and are rigidly enforced. The faculty is composed of an able body of men who are highly efficient as instructors.

The number of students in attendance at this school during the past year was 90, most of whom came from within the state of Oregon. The charges for tuition and board here are within the reach of all. Mt. Angel Seminary and College, although established but nine years, has already commanded widespread attention as an institution from which may be received a thoroughly correct training and a broad and liberal education.

QUEEN OF ANGELS ACADEMY.—The academy is situated in a healthful and most picturesque part of Oregon, and is one mile west of Mt. Angel college. The building occupied by the school, as seen by the illustration published on this page, is a handsome structure of brick and stone, spacious, well lighted and ventilated, and enjoying all modern improvements. Extensive grounds, groves and orchards adjoining the building, afford ample advantages for healthful recreation. The Woodburn-Springfield branch of the Southern Pacific railroad passes by the convent grounds, and the railroad station at Mt. Angel is but one-fourth of a mile distant.



QUEEN OF ANGELS ACADEMY, MT. ANGEL.

The academy is incorporated under the laws of the state of Oregon, which empowers the school to confer academic honors. It is conducted by the Benedictine Sisters, and while the rules of discipline are well defined, they are enforced in a rigid but not harsh

manner. Members of any religious denomination are received at the academy, but pupils must be willing to conform to the rules of the school, and for sake of uniformity, be present at the ordinary religious exercises. There are three distinct courses of study laid down in the institution. These are the normal, classical and commercial. There are also special courses in shorthand and typewriting, telegraphy, drawing and painting, music and needle-work.

The expenses for board and tuition are exceedingly moderate. The number of boarders enrolled at the school during the past year was 34. The surroundings of the Queen of Angels Academy are most inviting, the training received is thorough, and the associations with the Benedictine sisters, who are solicitous for the welfare of each of the pupils, are most pleasant.

Halsey, Oregon.—One of the most prosperous towns of the east side of the Willamette valley is Halsey, located in Marion county. Halsey is situated on the main line of the Southern Pacific railroad, 97 miles south of Portland and 18 miles south of Albany, the latter place being the point where the Oregon Pacific crosses the tracks of the Southern Pacific. Halsey is incorporated and now claims a population of about 400. A rich tributary section of country, typical of the highly fertile farming belt included within what is known as the Willamette valley, surrounds the town, and this, with the enterprising population of the place, has resulted in building up at this point a trade center of some little prominence.

PUBLIC SCHOOL, HALSEY.

The leading manufacturing industry at Halsey at the present time is a drain tile plant, which is owned and operated by D. Nash & Co., who are thoroughly practical tile manufacturers. An inexhaustible supply of blue clay is found within the corporate limits of the town, and this clay is pronounced by experts to be of a quality especially adapted to the highest grades of drain tile. The tile factory at Halsey has a capacity of 1,500,000 feet of tile annually. This output is shipped to various parts of the Willamette valley, most of the land of which, while very rich, is greatly improved by sub-drainage. Halsey is also an important wheat storage and shipping point. Three large warehouses are located here, with a combined storage capacity of 225,000 bushels of wheat. The Southern Pacific Railroad Company has built a side track to these warehouses and every facility is afforded by the railroad company for handling freight from this place in the most expeditious and most economical manner possible.

Three large general merchandise stores are located at Halsey, as well as a number of smaller mercantile establishments. The aggregate stock carried by the three largest houses is an evidence of the richness of the section of which Halsey is the business center. The Stafford, Garrett Co. carry a stock of general merchandise valued at from $12,000 to $14,000. Koontz & Power, also dealers in general merchandise, value their stock at from $17,000 to $20,000. Both of these leading houses command a trade that is not by any means confined to the town proper, but that reaches out from Halsey in all directions for a distance of from 5 to 10 miles. Another large house of Halsey is the Oriental Tea Company, which enjoys a large trade in staple and fancy groceries.

The efficiency of the public school system of Halsey is in advance of the population of the place. A fine new school building, an illustration of which is published

in connection with the present article, was recently erected at this point, at a cost of $5,000. It contains four well lighted and perfectly ventilated rooms. Four efficient teachers are employed in the public schools here, and the average daily attendance of scholars, exclusive of those residing outside the city limits, is about 100. Advanced courses of study have been provided for at these schools in addition to the common-school branches taught here. Church buildings are owned at Halsey by the United Presbyterian, Methodist, Christian and Baptist denominations. The town supports one weekly newspaper, *The News*. It has a public hall with a seating capacity of 300, and one good hotel, occupying a large and well arranged building, and one livery stable, afford ample accommodations to the traveling public.

Wheat is the staple product of the district tributary to Halsey, and the shipments of grain from this point are very heavy. While the soil of this section is equally as well adapted to fruit growing and hop culture as is the soil of other parts of the valley, the raising of wheat still claims the principal attention of the farmers here. The assessed valuation of the property at Halsey is $150,000, and the town is unincumbered with any bonded indebtedness. Every effort is now being made by the enterprising citizens of Halsey to advance the interests of their town and, with the many natural advantages in favor of the place as a natural trading point, these efforts will doubtless not prove unavailing.

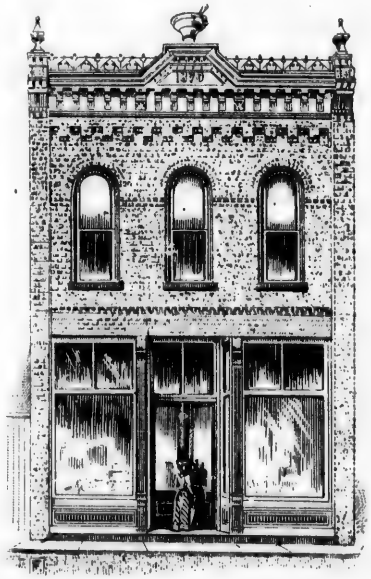
Harrisburg, Oregon.—Harrisburg is one of the old settled towns of the Willamette valley. It is 105 miles south of Portland on the main line of the Southern Pacific and has a present population of about 500. Harrisburg is also located on the Willamette river, which at favorable stages is navigable from this point to the mouth of the river, thus affording Harrisburg the benefits of an all-water route connecting direct with Portland.

One flouring mill with a capacity of 30 barrels, and a sawmill with a cutting capacity of 10,000 feet of lumber, per day, are located at this point. The output of both of these manufacturing plants finds ready sale in Harrisburg and in the rich sections of country adjacent. Work on the construction of a canal which will tap the Willamette river at a point three miles distant from Harrisburg is now being prosecuted, and it is expected to have the canal completed during the present year. The canal will furnish sufficient water power at Harrisburg for running several factories, an electric light plant and city water works.

The soil of the land in the immediate vicinity of Harrisburg is especially adapted to wheat and hop growing, and large quantities of wheat and hops are now annually shipped from this point. This is an old settled portion of the state and many large and highly improved farms are found in this section. Harrisburg supports a number of large stores and the different branches of business are well represented here. A spacious building containing four rooms is used for public school purposes. Four teachers are employed in these schools and the average daily attendance is about 125 scholars. The Christians and two denominations of Methodists have organizations here and are well supported. Harrisburg has one bank and supports one weekly newspaper, *The Courier*. A new city hall, also used for public gatherings, was completed in 1892. This hall has a seating capacity of 400 people. The travelling public will find one good hotel at Harrisburg, and one livery stable. The assessed valuation of the district in which Harrisburg is located—the section properly tributary to the town—is $200,000, and the town itself is entirely free from bonded indebtedness.

Junction City, Oregon.—Junction City, Linn county, was so named owing to this point being the prospective junction of the East and West Side divisions of the Southern Pacific railroad which now runs north and south on both sides of the Willamette river through the highly fertile section of the Willamette valley. The East Side division of this road is now the through line between Portland and San Francisco, and it is on the main line that Junction City is located, 110 miles south of Portland. The West Side division of the same road has its temporary southern terminus at Corvallis, about 28 miles southwest of Junction City. The route for the extension of the West Side division of the Southern Pacific between Corvallis and Junction City lies through one of the most fertile sections of the valley. It offers no obstacles to cheap and easy railroad construction and it is absolutely certain that this extension will be built in the near future. Junction is now the end of the Roseburg division of the Southern Pacific and it is here that the locomotive and train crews are changed. Large disbursements are regularly made here by the railroad company and this, with the wealth of the tributary farming district, makes this an especially prosperous town.

The official census of 1890 gave Junction City a population of 560. Since that time the population of the place has increased to 700. Two years ago a destructive fire wiped out the main business part of the town, but since the holocaust several fine, new brick blocks have taken the place of the wooden structures which lined the main business thoroughfare before the fire. The accompanying illustration is a correct representation of the drug store and banking house recently erected by W. S. Lee, who opened the first drug store in Junction City 21 years ago. Mr. Lee has unlimited confidence in the future growth of Junction City and he has accumulated here some of the most valuable city property. In conjunction with the drug store Mr. Lee does a general banking and insurance business, and he has built up a large city and country patronage in each of these departments.



W. S. LEE'S BLOCK, JUNCTION CITY.

There are numerous other large and successful business establishments in Junction, but that of G. M. Jackson & Co. is deserving of especial mention as showing the necessarily highly productive section of country which must be tributary to the town in order to support as large a house as this here. Junction City is the principal trading center for a large part of Lane county. The firm of G. M. Jackson & Co. have established at this point an immense general merchandise business. The value of their stock during certain seasons of the year reaches as high as $25,000. This store commands the best trade of the surrounding community and this trade extends into the surrounding country for miles distant.

Junction City boasts of one roller flouring mill which manufactures daily 75 barrels of flour of an excellent grade. Three large grain elevators are also located here, and these elevators have a combined storage capacity of 375,000 bushels. The adjoining country is a great wheat and oat-producing section, and most of the grain product of this section is stored in large elevators at Junction City, from which point it is shipped to Portland and San Francisco. During 1892 the shipments of wheat from Junction City aggregated 125,000 bushels. Hops and barley are also raised to some extent in this part of the state. During 1892 a new and handsome school house was completed at Junction City at a cost of $6,000. This building contains four large rooms, one teacher being assigned to each room. The average daily attendance of scholars during the past year was about 150. The Presbyterian, Methodist and Christian denominations have handsome church edifices at Junction City and each organization contains a large membership. The city has a good water-works system, the supply of water for city use being taken from two large reservoirs having a combined capacity of 16,000 gallons. The lower floor of the city hall is used for holding the fire apparatus. A good volunteer fire department is maintained here and the city is amply protected against fire.

Situated on the main street of the city is an imposing brick block which is used for hotel and opera-house purposes combined. The hotel is well arranged and well conducted, and the opera-house use, which has a seating capacity of 700, is one of the neatest little public auditoriums in the valley. The erection of this block involved an outlay of $24,000. One hotel in addition to the above is maintained at Junction City. The town supports one weekly newspaper, *The Times*. Three livery stables furnish ample accommodations to the traveling public.

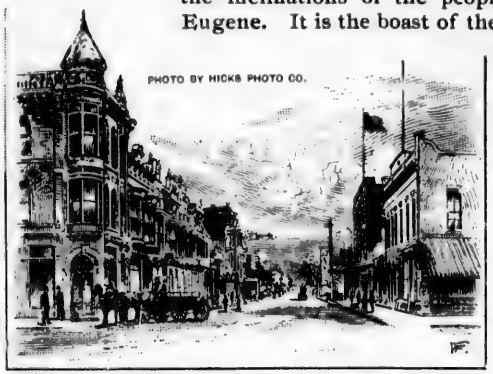
One of the richest portions of the entire Willamette valley is directly tributary to Junction City. Farming lands in this locality can be purchased at very reasonable prices. Mr. G. M. Jackson, a prominent citizen of Junction City, quotes prices on desirable wheat and hop land at from $35 to $40 per acre, land lying within one mile of the corporate limits of the town. The same lands, from three to four miles distant from the town, can be bought for from $10 to $20 per acre. Mr. Jackson is acquainted with all land values in this vicinity, and he is a thoroughly reliable person from whom to receive information on this subject.

Junction City is made up of a live and wide-awake people, who seem to appreciate their favorable location, and who will doubtless exert every effort in advancing the town's prosperity in the future as they have steadily done in the past.

Eugene, Oregon.—The most distinguishing feature of Eugene is its natural beauty of location. The district in which the city is located is one of the most picturesque parts of the state. This might truly be termed the gateway to the Willamette valley from the south. It is the dividing line between the low, level stretches of the valley proper and the undulating but highly fertile lands to the south. All of the section tributary to Eugene is perfectly watered, the soil is both warm and rich, and the country supports one of the most prosperous farming communities in the state.

Eugene has a population of about 4,000, and it is the highest point on the Willamette river that steamboats from Portland ever ascend. This stream flows by the city on the east. To the west is a range of hills covered with forests. From the highest eminences of these hills is commanded one of the widest views of the Willamette valley obtained from any elevation. Eugene is essentially a city of homes. The city has the appearance of some well laid-out park, shade trees lining all the

principal streets. Around all the fine private residences of the city are well-kept lawns and flower gardens, and these private grounds attest in a most striking manner the inclinations of the people who have made their homes in Eugene. It is the boast of the people here that Eugene is a city of homes, and the effort made to add to the home comforts of Eugene's population has done much to advance the city's interests in a material way.



WILLAMETTE STREET, EUGENE.

Eugene is the seat of Lane county, and it is also the seat of the Oregon State University, a higher institution of learning, that has attained great prominence among the great schools of the coast. Eugene is 123 miles south of Portland by the line of the Southern Pacific railroad, and 650 miles north of San Francisco by the same route. It is the natural trading and jobbing center of Lane county, and the development of this county during the last five years has resulted in largely increasing Eugene's population and wealth. The staple product of the farms of this section, as of the other parts of the valley, is wheat. In addition the farmers here pay large attention to fruit and hop growing, while the production of wool and stock raising are followed with profit in the foothill districts of the county. This is an ideal fruit-growing country. The nights here during the summer and fall months are warm, the soil is rich and of that peculiar light quality especially adapted to fruit growing, and fruit raising on the most extensive scale will some day be the most profitable industry of Lane county.

The main business street of Eugene has the stamp of metropolitan importance. It is wide and well kept, and it is lined, for a distance of four blocks in the center of the city, with fine two and three-story brick buildings. The display windows of the main business houses make a very attractive appearance. Every line of business is well represented here, and a number of the largest stores carry stocks of goods valued at from $25,000 to $40,000.

Owing to the many advantages of location a number of important manufacturing institutions have been established at Eugene during the past few years, and these industries are all on a paying basis. The local supply of raw material is large and is easily obtained, and the excellent shipping facilities enjoyed by the city assure a ready market for the product of the factories here. Located here is a large roller flouring mill with a daily capacity of 100 barrels. This mill manufactures a high grade of flour, and this flour is shipped as far north as Puget Sound. The company operating these mills has an elevator capacity of 100,000 bushels, and the entire milling plant is complete in every respect.

The Willamette Tannery, shown by the accompanying illustration, was established in Eugene 12 years ago, and since that time it has been turning out leather at the rate of 7,000 sides a year. The proprietors of the tannery are W. W. Haines

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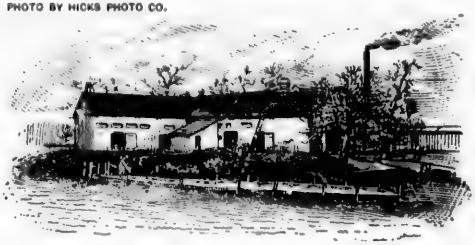

WILLAMETTE TANNERY, W. W. HAINES & CO., PROPRIETORS, EUGENE.

& Co., who are thoroughly experienced manufacturers in their line. The tannery employs eight men and consumes 250 cords of hemlock bark per year. Almost the entire output of the plant is shipped to San Francisco, via the Oregon Pacific railroad to Yaquina Bay and by steamer plying regularly between the latter port and San Francisco. Messrs. Haines & Co. state that the demand for the grade of leather manufactured by them is far in excess of the capacity of their plant.

Among the other factories located at Eugene is a sawmill with a cutting capacity of 25,000 feet of lumber per day. This mill gives employment to 25 men. Logs are floated to the mill down the Willamette river. The cannery and fruit-evaporating plant combined, located at this point, represent an outlay of $15,000. The cannery has a daily capacity of 50 tons of fruit while the evaporator can turn out 5,000 pounds of fruit a day. During the busy season, this plant gives employment to about 200 men, women and children, and it is the means of disbursing large sums of money here regularly. Eugene claims two planing and one shingle mill. The latter has a capacity of 20,000 shingles a day. Among the other manufacturing plants here are an ice factory and cold-storage house, foundry and machine shops, and a furniture and cutlery manufactory.

Eugene enjoys the benefit of a great water power. This has only been partially developed as yet. The flouring mill, two or three of the smaller factories and the city electric plant are now being operated by this water power. The water is brought to the city through a race which taps the Willamette river a short distance above Eugene. Eugene has a good system of waterworks, water for city use being taken from a reservoir located on a butte one-half mile distant. This reservoir is at an elevation of 175 feet above the city, and it has a holding capacity of 300,000 gallons. The water is pumped into the reservoir direct from a deep well whose supply is inexhaustible. Mains are laid through all the principal streets, and hydrants are located at the street crossings. Fire engines are unnecessary as a protection against a conflagration, as sufficient pressure is maintained at all times in the hydrants, which are easily tapped, to throw a stream over the highest building of any of the streets. Four well-drilled volunteer hose companies are maintained here, and the city has every facility for successfully fighting fire.

Over $20,000 has already been expended by Eugene in an excellent system of sewers covering the main streets of the city.

As a seat of learning, Eugene occupies a proud position among the most favored educational centers of the coast. In addition to the University of Oregon located here an excellent public school system is maintained. Two large modern school buildings, containing eight rooms each, furnish ample quarters for public school purposes. Sixteen teachers are employed in these schools. The schools are graded, and scholars, upon the completion of their studies at Eugene's public schools, are prepared to enter the freshman class in any of the best colleges.

PHOTO. BY HICKS PHOTO. CO.

LANE COUNTY BANK, EUGENE.

Eugene is the banking center of Lane county. Three strong financial institutions are located here, and they all do a large business. The two leading banks of Eugene are the Lane County Bank and the First National. The oldest banking house in Eugene and Lane county is that of Messrs. Hovey, Humphrey & Co., known as the Lane County Bank. It was established in 1882, and occupies one of the finest brick corners, shown by the accompanying illustration, in Eugene. The president of the Lane County Bank is Hon. A. G. Hovey, ex-member of the state senate and ex-mayor of the city of Eugene. Mr. Hovey is regarded as one of the leading and prominent citizens of Eugene and of the state, and he enjoys the confidence of all who know him. H. C. Humphrey, a son of one of Oregon's pioneers, the late Hon. Geo. Humphrey, is the cashier of the bank, J. M. Abrams is the assistant cashier, and A. G. Hovey, Jr., is the teller.

The Lane County Bank continues to do an increasing business with all classes and interests of the people of Lane county with each successive year.

The First National Bank of Eugene, shown by the accompanying illustration, is one of the most solid financial institutions in the Willamette valley. It was first established as a private bank in 1884 by the prominent firm of Hendricks & Eakin, and was incorporated as a national bank in 1886. The First National Bank was first capitalized with $50,000, and the surplus now amounts to $50,000 more. The total amount of business transacted by this bank, in 1892, was $7,000,000. The Hon. T. G. Hendricks, a resident of the state of Oregon since 1848, and one of the prominent citizens of Eugene, is president of the First National Bank; Hon. S. B. Eakin is cashier, and P. E. Snodgrass is the assistant cashier.

FIRST NATIONAL BANK, EUGENE.

Eugene has the benefit of the strongest of religious influences. Eight strong church organizations are maintained here, all of which own handsome church edifices. These are denominations of the Presbyterian, Cumberland Presbyterian, Methodist, Episcopal, Catholic, Congregational, Christian and Baptist. Three well conducted newspapers, *The Daily Guard*, *The Semi-Weekly Register* and *The Weekly Oregon State Journal*, render effective aid in advancing the city's interests. A handsome opera house, with a seating capacity of 1,000, has recently been completed at Eugene. Eugene's finances are in a most satisfactory condition. The assessed valuation of city property, in 1892, was $1,600,000, and the total bonded indebtedness of the city today does not exceed $20,000. Excellent accommodations are pro-

vided for tourists here, Eugene supporting three good hotels and four well stocked livery stables.

An active board of trade has done much to crowd Eugene to the front. Through the agency of the board of trade here liberal inducements, in the way of proffers of land and money, have been offered manufacturers to locate at this point, and this liberal policy has resulted in much practical benefit to the city. Eugene's corporate limits now extend two miles east and west and one mile north and south. The main street leading from the depot out to the university, is traversed by a street-car line, over which cars are run at frequent and regular intervals. Eugene has always been a prosperous point, and the energy of its citizens during the past few years, together with its many advantages of location, has resulted in making Eugene one of the leading centers of population in Western Oregon.

The University of Oregon.—The University of Oregon, established at Eugene, in 1872, by act of the state legislature, and opened for reception of students in 1876, has passed the crucial period of the struggles of all new institutions. The able management and liberal support by the state have caused the institution to take high rank among colleges of this country. Its location at Eugene cannot be surpassed for health, convenience of access and beauty of scenery. The control and management of the university was entrusted to a board of regents consisting of nine members appointed by the governor. The present board is composed of the following members: Hon. R. S. Bean, Salem; Hon. L. L. McArthur, Portland; Hon. Henry Failing, Portland; Hon. A. Bush, Salem; Hon. S. Hamilton, Roseburg; Hon. A. G. Hovey, Eugene; Hon. T. G Hendricks, Eugene; Hon. C. C. Beekman, Jacksonville; Hon. Joshua J. Walton, Eugene. The late Hon. Matthew P. Deady, L. L. D., was the honored president of the board of regents for the last 20 years.

The university has the following endowment: $100,000 realized from the sale of lands granted by the United States; $50,000 generously donated by Mr. Henry Villard. The interest on said sums is used for the support of the school, in addition to the sum of $30,000 annually appropriated by the state.

The university campus contains 18 acres, situated at the head of the great Willamette valley, on a gradually ascending elevation, from which can be obtained a splendid view of the surrounding country. The main buildings, as seen by the illustration on the opposite page, consists of three brick structures, the two larger ones being used for school purposes, while the smaller one is used for a gymnasium. The two other buildings are used for dormitories. The observatory occupies a sightly location on the top of Skinner's Butte, which overlooks the city of Eugene and surrounding country, and is convenient to the other buildings.

The library of the university contains 5,000 volumes of carefully selected books, which is being increased each year from the Henry Villard library fund. The regents have expended $6,000 in the purchase of apparatus for the departments of chemistry and physics, and mathematical and astronomical instruments for the school.

There are four courses of study in the university, the classical, scientific, literary and English. Tuition is free, but each student is required to pay an incidental fee of $10 per year. Students can obtain board and rooms in private families at reasonable rates, and have use of dormitories at the cost of maintenance.

The school of law of the university is conducted at Portland, where access is more easily had to excellent libraries and a greater variety of courts. The ablest lecturers are employed to preside over this department. The course of law studies

ENGRAVED BY THE OREGONIAN
VILLARD HALL
DEADY HALL

PHOTO. BY HICKS PHOTO. CO.

UNIVERSITY OF OREGON

EUGENE

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consists of two sessions of 20 weeks each, and the tuition is $60 per session. Application for admission to the school of law should be addressed to Prof. Richard H. Thornton, Portland, Oregon.

The school of medicine is also conducted at Portland. The faculty is composed of the best physicians of the state, most of whom are connected with hospitals of the city, which offer advantages for clinical and didactic instruction unsurpassed in the state. For full particulars as to course of study, fees and other information of medical department, address C. C. Strong, M. D., secretary, Portland, Oregon.

The conservatory of music of the university is conducted by Miss Mary E. M'Cornack, graduate of the New England conservatory, assisted by talented teachers. Instruction is given on the piano forte, organ, violin, and in voice culture; also in harmony and theory of music.

The University of Oregon has justly earned a reputation for higher education of which the entire state may feel proud. Some of the ablest men and women of Oregon and neighboring states belong to the alumni of this institution. From its inception the aim of the regents and faculty has been to make thorough scholars rather than rush through to graduation a large number of students.

The curriculum of the university has always maintained a comparative standard with prominent Eastern colleges, and has long attracted attention as one of the best-conducted institutions of learning in the west. Application for catalogues can be made to Joshua J. Walton, secretary of board, Eugene, Oregon.

Lane County, Oregon.—Lane county occupies a position at the head of the Willamette valley, the garden spot of Western Oregon. It is one of the largest counties of the valley. It extends for a distance of 150 miles from the crest of the Cascade Mountains west to the Pacific ocean. From Linn county, by which it is bounded on the north, it reaches for a distance of 50 miles south to the northern boundary of Douglas county. The county contains about 3,700,000 acres, about 500,000 of which are now under cultivation. A large part of the surface of the county is mountainous, elevations that are covered with a dense forest growth of timber, as are the higher portions of all Western Oregon. Some 300 square miles of the Willamette valley in Lane county, or that part of the county lying between its northern boundary line and Eugene, the county seat, and even for some distance beyond this latter point cannot be excelled for agricultural and grazing purposes. To the east and west of this very rich strip along the foothills of the Cascade and Coast range of mountains respectively, are numerous small valleys which are rapidly being filled with a class of industrious settlers. The lands of these small valleys are valuable for fruit and hop raising, and they are equally as fertile as the lands of the Willamette valley proper. Prominent among the large water courses of Lane county are the Willamette, McKenzie, Siuslaw, Coast Fork and Mohawk rivers. These streams drain large areas of country, and the valleys along their courses are all easily accessible and especially adapted to a high state of cultivation.

Located on a branch of the Coast Fork of the Willamette river in the eastern part of the county are the rich Bohemian gold and silver mines. The mining development of Lane county is not as pronounced as the mining interests of the part of the state further to the south, but sufficient prospecting has already been done in the mountains of the county to show that valuable deposits of precious metal exist here, and earnest efforts are now being made to develop the mines here into paying properties.

Fruit and wheat growing are the principal industries of the farming districts of Lane county. The present annual yield of wheat in the county is about 500,000 bushels. In addition to wheat, about 5,000 bales of hops are annually shipped from the county, and the product of wool of the county reaches about 200,000 pounds. The Willamette river, which is navigable during the winter months from Portland to Eugene, was formerly the principal freight route for the products of Lane county to reach a market at Oregon's chief city. Most of the shipments of this part of the state now, however, are made over the lines of the Southern Pacific and Oregon Pacific railroads, the former road extending north and south through the valley, while the Oregon Pacific runs east and west, crossing the Southern Pacific at Albany and terminating on the west at Yaquina City on Yaquina Bay.

Thousands of acres of government land are still unoccupied in Lane county. Most of this land is well back from the old established towns of the county, but along the McKenzie river are large tracts of good land still unoccupied. There is much very fine land in the county offered for sale at from $5 to $10 an acre, and this land is easily cleared and is highly fertile when put into cultivation.

The present population of Lane county is about 16,000. It is one of the old established populated parts of Western Oregon, and it is the home of many well-to-do farmers, and the people who reside here are principally prosperous and contented.

East Cottage Grove.—East Cottage Grove is located in Lane county, on the east bank of the Coast Fork of the Willamette river. It is 145 miles south of Portland by the Southern Pacific railroad, on the main line of which it is located. On the west bank of the river at this point is located the old and original town of Cottage Grove, which was first established in 1862. The town was incorporated in 1889, and it has a present population of about 150.

Old Cottage Grove is a place of but little importance. A flouring mill with a daily capacity of 40 barrels is located here. It contains one large general merchandise store as well as several smaller business houses, and these, with one hotel, are the noteworthy features of the old town. Four years ago new life was infused into this old established place, and in spreading out, the principal business interests of the town were soon transferred to the east bank of the river at this point. The town on the east bank was incorporated by act of the last legislature under the corporate name of East Cottage Grove. This latter town is now a bustling place of about 450 population and the new town is making very rapid strides in substantial development. It now boasts of a fine roller flouring mill with a daily capacity of 60 barrels. A bank is located here with a capital stock of $30,000, and the town supports a weekly newspaper, *The Echo-Leader*. A dozen or more business houses, as well as two hotels and a livery stable, are well patronized in the town. Three substantial brick buildings have been erected on the main street and the construction of other buildings of a similar character is already contemplated. The public school of the town is conducted in a neat two-story building. About 100 scholars are in daily attendance at the school here, which is in charge of three teachers. Five religious organizations are supported here. These are the Cumberland Presbyterian, Christian, Methodist, Baptist and Catholic. The first two denominations worship in church edifices of their own.

The resources of the section tributary to East Cottage Grove are lumber, wool and fruit, which constitute the principal shipments from this point. In addition the

town is also the only supply point for the rich Bohemian gold and silver mines situated 40 miles east, and which are now being developed.

Drain, Oregon.—In Douglas county, at the junction of Pass and Elk creeks, is located the flourishing little town of Drain. It is on the main line of the Southern Pacific railroad, 161 miles south of Portland, and it contains a population of about 300. The town enjoys a considerable degree of prominence in being the seat of the State Normal School, which receives considerable mention in an article published in connection with the present article on Drain.

A small sawmill and a gristmill constitute Drain's manufacturing enterprises. In the vicinity of Drain are forests of fine timber. This timber is now being extensively cut, and the rafting of logs down the streams of this section to the mills at Drain and other points, is one of the leading pursuits of the people of this part of the state.

The superior educational advantages of Drain have always attracted many families to this point. One of the strongest factors which led to the selection of Drain for the seat of the State Normal School was the general healthfulness of this part of the state. In addition to the normal school, Drain has the benefit of a good system of public instruction, which is conducted under the auspices of the State Normal School. The average daily attendance at the public school is about 80. Two church organizations are maintained at Drain, the Methodist and the Christian, both of which have large memberships. One hotel and one livery stable take care of the interests of the traveling public visiting this point.

All overland trains of the Southern Pacific stop at Drain, where connection is made by stage for Coos Bay points. Coos Bay is 80 miles west of this place. The principal shipments from Drain are lumber, live stock and poultry, and the country immediately tributary is rich and capable of supporting a much larger population than now finds homes here.

The State Normal School.—The State Normal School, at Drain, Oregon, so designated by act of the Oregon legislature in 1885, is fast taking its place among the prominent institutions of learning in the Pacific Northwest. The main building of the State Normal School, shown by the accompanying illustration, was erected during the past year at a cost of $10,000. The most approved style of architecture has been adopted in the design of the building, which is heated throughout by hot air and which is provided with a perfect system of ventilation. A new dormitory for ladies and a boarding hall for both ladies and gentlemen have been added during the past year.

STATE NORMAL SCHOOL, DRAIN.

The courses of study adopted in the school are normal, business, academic and post-graduate, all of which departments are presided over by a thoroughly competent and efficient corps of instructors. State diplomas are given students who complete the normal course, and diplomas from the school are awarded those finishing the academy, business or post-graduate courses. Graduates from the academy are prepared to enter the freshman class of any college in the state.

The necessary expenses of scholars in attendance at the State Normal School have been reduced to a minimum. Good board and room, principally furnished, can be secured at the boarding hall for $2.25 per week, while the tuition fee is but $6.50 per term of 10 weeks. It is a noteworthy fact in connection with the institution, that families residing in Drain, or in the school district here, are entitled to free tuition for their children both at the public and State Normal School. The average attendance of scholars at the Normal School during the past year was 250. With the recent enlargement of school-room facilities and with the increase of the membership of the faculty to 10, it is expected that the attendance during the present year will reach 400. W. T. Van Scoy, A. B., the president of the Normal School, is well qualified for such a position, he having received a classical education at the Northwestern University of Illinois, and also having received the degree of A. B. from the University of Portland.

Drain is considered one of the most healthful locations on the line of the Southern Pacific railroad. It is situated in a beautiful valley commanding a superb view of the Calipooia Mountains, while two rippling streams of water course through the town. This is an ideal site in every respect for the establishment of an educational institution of a high order, and the location of the State Normal School at this point was a wise act on the part of the Oregon legislature.

Oakland, Oregon.— Oakland, Douglas county, Oregon, is very picturesquely located in the very heart of the rich Umpqua valley. It is on the main line of the Southern Pacific railroad, 181 miles south of Portland. The Calipooia river, a branch of the Umpqua on the north side of the town, and Camas Swale creek on the south, afford an excellent natural system of drainage for both Oakland and the country surrounding the town. Oakland is, today, the second largest town in Douglas county. It contains a population of about 500, and is a very prosperous trading point.

The citizens of Oakland now contemplate providing the town with a good system of water works by establishing a pumping station on the Calipooia river, one mile distant from the town. The water will be forced from this station to a reservoir located on an eminence near the town. It is the intention to complete this water-works plant during the present year. Oakland is distinguished from other towns of equal population in Western Oregon by its large shipments of fruit, poultry and eggs. The soil of the Umpqua valley is well suited to fruit culture. At Chenoweth Park, three miles from Oakland, is a tract of 3,000 acres of land which is being cultivated for orchards and vineyards, by an incorporated company having a capital stock of $72,000. Already 500 acres of this land are planted in prune and peach trees. Prune crops, in this section, are considered the most profitable to growers, the average net profit per acre from a carefully attended prune orchard, being about $200. Oakland annually ships more poultry (raised in the vicinity of this town) than any other town of the same size in the state. During 1892 there were shipped from this point 6,950 dozens of geese, chickens and ducks, 15,000 turkeys, and 70,000 dozens of eggs. The total receipts here for all shipments made by the town, in 1892, amounted to $279,000.

PUBLIC SCHOOL, OAKLAND.

Four brick business blocks occupy prominent corners in Oakland, and as many more brick buildings will be completed here during the present year. The stone for

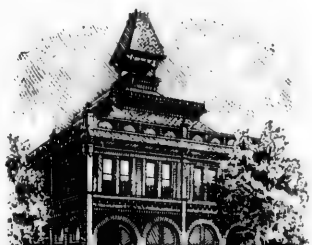
the foundations and trimmings of Oakland's best buildings is blue sandstone obtained from a quarry situated within a short distance of the town. The brick used here is of an excellent quality, and is made by a local company. In the northern part of Douglas county, six miles distant from Oakland, are rich quicksilver mines, which have already attracted considerable attention, and these mines will doubtless, in time, be worked on a large scale. In the line of manufacturing Oakland has a large roller flouring mill, which has a capacity of 80 barrels of flour per day. The flour made here is of a superior quality, and it enjoys a wide sale. Four large stores are located in Oakland, and these business houses carry stocks of goods valued at from $10,000 to $25,000 each. The town also contains one bank and the usual number of small business establishments found in a place of this size.

Oakland's schools are conducted in a good building, and they are in charge of one principal and one assistant teacher. The present school building is hardly large enough to meet the demands for school room here, and it is the intention of the school board to erect an addition to this building during the present year. The average daily attendance at the public schools here is 125. Oakland supports six church organizations, four of which worship in their own buildings. The denominations represented here are the Presbyterian, Baptist, two Methodist, Episcopal and Christian. Two hotels and a single livery stable meet the requirements of the traveling public which visit this town.

Fruit culture, wool growing, and poultry and stock raising have together combined to make Oakland a very prosperous trading and shipping point. The country that is directly tributary to Oakland extends as far from the town, in certain directions, as 40 miles, and most of this tributary section is rich and easily put in a condition for cultivation. The business men of Oakland are generally alive to their opportunities, and they are making earnest efforts to advance their town's interests.

J. H. Ray, a wide-awake, reliable and old established real estate agent, of Oakland quotes prices on improved lands suitable for fruit culture, lying within one mile of the town, at $15 per acre. The same character of lands, five miles distant from the town, can be bought at from $7 to $10 per acre. The people of Oakland, at the present time, are able to boast that their town is entirely free from debt, and that they have a surplus in the town treasury, a somewhat exceptional condition of things with the growing towns of the state. Everything at Oakland, however, is in a healthy condition, and a flourishing center of trade will always be maintained here.

Roseburg, Oregon.—Roseburg, the judicial seat of Douglas county, is located in the Umpqua valley, at the junction of the South Umpqua river and Deer creek. It nestles in a fertile little valley, almost entirely surrounded by a range of rugged hills, which serve as a most effective barrier against all violent wind storms. The surface of the townsite is gently undulating, thus affording a perfect natural drainage. Roseburg is an attractive town; it is the center of a country which furnishes excellent sport in fishing or hunting, and the location is a decidedly healthful one.



NEW CITY HALL, ROSEBURG.

Roseburg is a division station on the main line of the Southern Pacific. It is 197 miles south of Portland. It claims today a population of about 2,500, and is the largest town in Douglas county. The principal manufacturing industries of the place are two roller flouring mills, which have a daily capacity of 100 barrels, a brewery which supplies the local market, a sash and door factory, and a planing mill. Smaller factories located here are devoted to the manufacture of brooms and cigars, respectively, and a fruit cannery and brickyard are also in successful operation at this point.

Roseburg, in the main, is well and substantially built. Many fine brick blocks line the principal street, and the sidewalks in front of the principal business houses are paved with stone. The merchants of Roseburg are prosperous, many of the leading business men having resided there since the place was first established. Roseburg has two banks, one of these, the Douglas County Bank, being the oldest in the county. This latter bank was established in 1883. Its capital stock is $30,000, and its financial responsibility, at the present writing, is $100,000. The officers of the Douglas County Bank are: O. F. Godfrey, president; S. C. Flint, vice-president, and Peter Hume, cashier.

COUNTY COURT HOUSE, ROSEBURG.

Roseburg's educational facilities have kept pace with the growth of the town. A new eight-room school building has recently been completed here at a cost of $15,000. A principal and eight assistant teachers are employed in the public schools, and the courses of study provided for, to which has recently been added a high school grade, compare favorably with that of the best public schools of the state. Eight church organizations own buildings of their own at Roseburg. These are the Presbyterian, two Methodist, Baptist, Episcopal, Christian, United Brethren and Catholic.

Roseburg boasts of a handsome new brick opera house, and it supports two live papers, *The Semi-Weekly Review* and *The Weekly Plaindealer*. Three large hotels are maintained here, as well as the same number of smaller ones, and four livery stables are well stocked with horses and carriages. The Umpqua river, at this point, furnishes a valuable water power. This power is now being utilized by the factories already located here. Roseburg has a good system of electric lights, good water works, and a good system of sewerage has been established. Two large reservoirs, with a combined capacity of 600,000 gallons, are located on a high eminence, and these reservoirs afford an ample pressure in the city mains to throw a stream of water over any of the highest buildings. Five miles of water pipes have been laid over the city, at a cost of about $30,000. Four volunteer fire companies are maintained in Roseburg, and all of these companies are well drilled.

The sewerage system of the city covers the principal street, and drainage of the buildings bordering on the alleys is provided by lateral lines of pipe tapping the main sewers. The sewerage system and the city hall together involved an outlay of $25,000. This money was raised by bonds guaranteed by the city. The fine electric light plant of Roseburg was established in 1891 at a cost of $20,000. This is considered one of the most efficient plants for lighting purposes on the coast.

The soil in the vicinity of Roseburg is especially adapted to the raising of fruit. Prunes and pears do particularly well here. Cereals are raised in the Umpqua valley to a considerable extent, although not quite so heavily as in portions of the Willamette valley further to the south. The stock and wool-growing interests of Douglas county are very large and have proved of great benefit to Roseburg, which is the principal trading and shipping point of the valley. The mining interests of the county, while but slightly developed at the present writing, have contributed largely to the solid growth of Roseburg.

The valuation of taxable property in Roseburg, as shown by the assessment rolls of 1892, was $446,589, and the total bonded indebtedness of the city today is $25,000.

SCHOOL BUILDING, ROSEBURG.

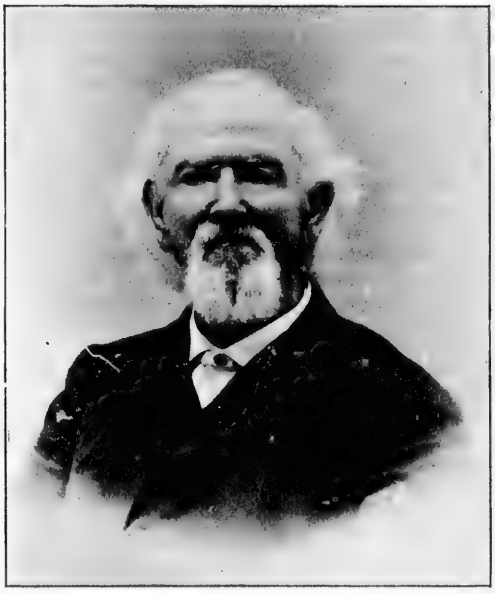
The site which Roseburg occupies is an enviable location for the establishment of a city, both by reason of the exceptional healthfulness of the place, and also for the reason that the town is located in one of the richest parts of Southern Oregon. The people of Roseburg are now placing great hopes on the early completion of the Roseburg & Coos Bay railroad. The distance from Roseburg to Coos Bay is but 90 miles, and already 25 miles of the Coos Bay end of the line have been completed. The opening of this line connecting Roseburg with the coast, would open a new market at San Francisco for the products of Southern Oregon, and Roseburg, as the terminus of the road, at a point where connection will be made with the through line of the Southern Pacific, would be the principal shipping point of all freight from Southern Oregon which would pass over the new road to reach tidewater.

AARON ROSE, THE FOUNDER OF ROSEBURG.—The story of the life of Aaron Rose, after whom the prosperous and promising town of Roseburg was named, and to whom the place owes everything for its present prosperous condition, presents an interesting narrative in connection with the early history and development of Douglas county. Mr. Rose, whose portrait is published with this sketch, is a pioneer in the true sense, he having crossed the plains from Michigan in 1851. He found his way to the valley of Umpqua, inhabited at that time by a tribe of Indians of the name the valley now bears, and here he settled on a donation claim of 320 acres from the government, the site which Roseburg now occupies. Mr. Rose, although now in his 80th year, is still comparatively strong in body and mind, and he delights to tell of the struggles and hardships of the pioneer days in Oregon, and then contrast that period with the present in which life is a dream in comparison with that of the early settlers of the state. In the early days, however, Mr. Rose states, that money was more plentiful than provisions. Eggs and apples sold readily at $1 apiece, and flour at $1 a pound. Gold dust was the principal form of exchange, for even thus early gold discoveries were being made here on every hand.

The site of Roseburg is a most natural one, being almost surrounded by a row of hills which afford perfect shelter. Unlike many of the early pioneers of Oregon who acquired vast areas of land, and who, in many instances, are adding to rather than disposing of any part of their landed possessions, Mr. Rose has ever held out the most liberal inducements for people to locate in Roseburg and join him in building

up a flourishing city at this point. Every manufacturing enterprise, and many of the leading mercantile houses in Roseburg today, were given free sites and free lots. When the Southern Pacific railroad was being built through Oregon, Mr. Rose gave the company a land subsidy valued at $30,000 to run through Roseburg, which is now the end of one of the divisions of the road. To the Roseburg & Coos Bay railroad, now in course of construction, Mr. Rose gave five acres of land for depot facilities. Every church in Roseburg, of which there are eight, was given a lot free and money in addition to aid in the construction of the buildings. Mr. Rose, besides being Roseburg's chiefest benefactor, has also done much for charity. The poor and needy have never appealed to him in vain for deserved assistance.

PHOTO BY. GRAVES.



AARON ROSE, FOUNDER OF ROSEBURG.

Prior to 1860 Mr. Rose gave most of his time to farming, but since then he has devoted himself to the building up of Roseburg, having become interested in the various city enterprises, both as a shareholder and in encouraging such institutions as city water works, electric lights, etc., by giving liberal bonuses. Mr. Rose owns the New Era flouring mills which have a daily capacity of 75 barrels, and a warehouse capacity of 25,000 bushels.

The father and founder of Roseburg, although having passed the noontime of life, is today just as ambitious for the welfare of the town as he has always been, and his hope that Roseburg shall be the foremost city in Southern Oregon seems likely to be fulfilled, even during the life of its earliest promoter.

Douglas County, Oregon.—The northern boundary line of Douglas county, the Calipooia range of mountains, makes one of the most important divisions of Western Oregon. To the south of the Calipooia Mountains lie the rich but rolling lands contained in Douglas county, while extending for more than 100 miles north of this range is the flat and highly fertile section of the Willamette valley. The southern boundary of Douglas county is the summit of the Canyon range of mountains, immediately south of which lies the famous Rogue River valley. The county extends east as far as the summit of the Cascade Mountains, while it is bounded on the west by

the Pacific ocean. The total area of Douglas county is about 4,900 square miles. One of the most fertile parts of the county is the Umpqua valley, through which the river of the same name flows. Numerous other smaller valleys are found in the county, and it is crossed in all directions by many small streams of the clearest mountain water.

The lands of Douglas county are more hilly in their nature than is the surface of the lands of the Willamette valley to the north. The mountainous sections of the county are covered with forests of the finest timber, while the foothill districts are covered with a fine growth of grasses which furnish excellent pasturage for all kinds of stock. The soil of the valley lands is of a mellow, fertile nature, and this soil gives large yields of cereals and vegetables, and it is well adapted to the cultivation of fruit. The climate of the Umpqua valley is even more equable than is the mild climate of the Willamette valley. The average annual rainfall in the Umpqua valley, as shown by records carefully kept for the past ten years, is but 34.32 inches, and extremes of heat and cold are practically unknown here.

The resources of Douglas county are varied, and comprise agricultural products, minerals and timber, wool growing, fruit culture and stock and grain raising. Special attention has been paid in the county to the raising of prunes, peaches and poultry, and these three industries will outrank in magnitude those of any other county of the state. The special adaptability of this land for prune raising is shown by the statement that during 1892 the product of 5 acres of prune orchard in the county sold for $2,000. It is estimated that from one-half to seven-tenths of the crop is the net profit from prune raising.

The minerals found in Douglas county comprise gold, silver, quicksilver, iron, nickel, and in addition extensive deposits of coal, cement, limestone and marble are found in different parts of the county. Valuable gold mines in the county have already been opened up on Coffee, Starve-out, Cow, Myrtle, Mitchell, Calipooia and Jordan creeks. Renewed interest has been shown in the gold mines of this county during the past few years, and recent discoveries of the yellow metal in this section have convinced the people of the county that most valuable deposits of gold exist in this part of the state.

Perhaps about one-half of the lands of Douglas county is susceptible of cultivation. The title to much of this land still vests in the government and is open to entry by settlers. Douglas county today contains not to exceed 12,000 population, while the latent resources of this county alone are sufficient to support a population ten times as large. This is one of the most inviting parts of Western Oregon, and it is worthy of the attention of people who contemplate settling in the West.

PUBLIC SCHOOL, GRANT'S PASS.

Grant's Pass, Oregon.—Grant's Pass, the judicial seat of Josephine county, has a population of about 2,000. It is located in the heart of the valley of the Rogue river which has its source in Jackson county, flows through Josephine and Curry counties and empties its waters into the Pacific ocean. Grant's Pass is the largest town in the Rogue river valley. It is supported by the rich mineral, timber and agricultural resources of the country adjacent. It is located on the

main line of the Southern Pacific, 296 miles south of Portland and 476 miles north of San Francisco. The merchants here have the benefit afforded by the competition of the Portland and San Francisco wholesalers to sell goods in this field. The town is the end of an important division of the Southern Pacific, and a round house and railroad repair shops are located at this point. The principal industry of Grant's Pass is the manufacture of sash, doors, blinds, mouldings and boxes. A company with a capital stock of $125,000 is engaged in this business here and about 100 men are employed in the factory. Other smaller factories at Grant's Pass are a brick-making plant, planing mill and broom factory. Several fine brick blocks have been erected on the main business street of the town and one bank looks after the financial affairs of the business community. A large ten-room brick school building occupies a prominent site in the city and eight teachers are employed in the public schools here. The number of scholars in attendance is about 350. There are seven churches located here, four of which—the Methodist, Presbyterian, South Methodist and Baptist—own their own buildings. A circulating library, free reading room and a new brick opera house, with a seating capacity of 1,000, are located at this point.

The Rogue River Courier and *Oregon Observer*, two weekly papers are published at Grant's Pass. Grant's Pass annually ships a large amount of fruit, lumber and brick, and about $100,000 in gold annually reaches this point from the rich placer deposits of the valleys adjacent.

Josephine County, Oregon.—Josephine county lies to the east of Curry, south of Douglas, west of Jackson and extends to the California line on the south. Its area is about 1,800 square miles and its present population is about 8,000. Until the completion of the Southern Pacific railroad through the southern part of the state comparatively little was known of this rich part of Oregon. During the past ten years, however, wonderful strides have been made here, and this is now classed among the most prosperous portions of the Northwest.

PHOTO. BY E. F. EVERITT.

HOP PICKING, NEAR GRANT'S PASS.

The soil of the lands of Josephine county is of remarkable fertility and will produce almost anything grown in the temperate zone. Cereals and fruits of all kinds grow in profusion here. Snow seldom falls in the valleys of the county, but on the higher elevations, which are covered with valuable forests of fir, cedar, oak, pine and other timber, the snowfall is sometimes heavy. The valleys of Josephine county are now practically one vast fruit garden. Peaches grow here in size and flavor equal to the most luscious of the New Jersey peach crop, and the tons of melons raised here which are annually shipped to the Portland and other markets to the north are not excelled in quality by the melons raised in the most favored parts of the United States. All varieties of fruit do well on these lands and the vineyards and orchards of Josephine county will some day rival those of the famous California fruit belt.

The entire area of Josephine county is well watered, numerous creeks of the

PHOTO. BY E. F. EVERITT.

WATERMELON PATCH, NEAR GRANT'S PASS.

clearest water flowing down the mountain sides and traversing the land in all directions. These streams also furnish fine water power at convenient points. The mountainous districts of the county contain rich deposits of gold quartz, silver, copper and other metals. Widespread attention is just at the present time being attracted to the mineral wealth of this county and the mines here some day will rival those of Eastern Oregon or of the Cœur d'Alenes in Northern Idaho.

Medford, Oregon.—Medford is one of the comparatively new towns of the southern part of the state. It is located in the Rogue River valley, on the line of the Southern Pacific railroad, and is 328 miles south of Portland and 444 north of San Francisco. It was established about 10 years ago, and now has a population of some 1,800. Medford is four miles east of Jacksonville, the judicial seat of Jackson county, the two towns being connected by a steam-motor line.

The country in the immediate vicinity of Medford is devoted almost entirely to the raising of corn, wheat, rye, barley, fruits and vegetables. Almonds, grapes, figs and fruits of a semi-tropical nature, are raised here to perfection. The melons and peaches of the Rogue River valley are renowned for their size and quality, and the fruit industry here is conducted on a scale that has made this one of the best known fruit-producing belts on the coast.

Medford supports a number of manufacturing industries, among which is a distillery, with a daily capacity of 25 barrels, two pork-packing establishments, a sash, door and planing mill, a flouring mill, with a capacity of 100 barrels a day, and a brewery and an ice plant. The distillery has been in successful operation here for more than two years past. The inducements offered for the location of this plant at Medford were a liberal bonus by the people of the place and the special adaptability of the soil of the tributary section to the raising of the finest quality of corn. The farmers in the immediate vicinity of Medford, and in Klamath and Lake counties, in the extreme southern part of Oregon, have found a valuable market for their hogs at the pork-packing establishment established at Medford. The manufacturing industries located here have done much to advance the interests of the town, and it is significant of the enterprise of the people here that increased interest is yearly being paid to manufacturing at this point.

Medford boasts of a number of fine brick blocks which line the main street. The business community is generally prosperous, and a number of the leading stores carry very heavy stocks of goods. Good public schools are maintained here. A new frame six-room school building has recently been erected at Medford, at a cost of $10,000. This building is well ventilated, it is heated by hot air, and is perfect in all its appointments. Six teachers are employed in the public schools at this point, and the average daily attendance of scholars is about 500. Seven churches are maintained at Medford. These are the Presbyterian, Episcopal, Christian, two Methodist, Baptist and Catholic. All of these religious organizations own church buildings of their own. Medford contains one bank, and one weekly newspaper, *The Mail* is published in the town. Medford also boasts of a fine opera house, with a

seating capacity of 500. One hotel and two livery stables furnish ample accommodations to the traveling public. The assessed valuation of city property at Medford is $262,413, and the only bonded indebtedness of the municipality is that incurred for the construction of the city water-works plant, which involved an outlay of $20,000.

PHOTO BY EVERITT, GRANTS PASS.

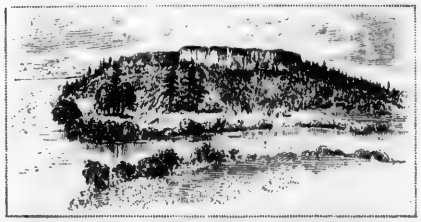


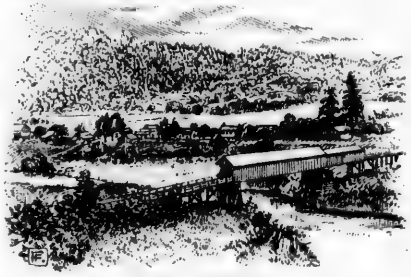
TABLE ROCK, NEAR MEDFORD, ROGUE RIVER VALLEY.

The motor line which connects Medford with Jacksonville makes three round trips daily between these two points. Work has actually been begun on the extension of this road to tap an unrivaled sugar pine district, 25 miles distant from Medford. This road will ultimately be extended to Klamath Falls, 75 miles southeast of Medford. Klamath Falls is the center of a wonderfully rich farming district, and will prove a most important point on the completion of the road there. It is estimated that 50 miles of the proposed route of the new road lies through an inexhaustible forest of sugar pine timber belt, and the opening of this timber belt to the markets of Medford will do much to add to the solid prosperity of the latter place. That the people of Medford appreciate the benefits of the extension of the road is attested by the statement that they subscribed a bonus of $40,000 to the company building the line.

If the resources of the tributary country and the prospective development of this district are duly considered, the prices asked for farming lands in the immediate vicinity of Medford are not unreasonable. Messrs. Hamilton & Palm, the leading real estate firm of Medford, quote the price of property adjoining the city limits at $75 per acre. This price decreases as the distance from the town limits increases. Messrs. Hamilton & Palm are thoroughly conversant with both city property and farm values in this part of the state, and information furnished by them on this section can be regarded as strictly reliable.

The Hotel Medford, of which M. Purdin is proprietor, is conveniently arranged for the accommodation of commercial travelers, for whom free sample rooms are provided. This popular hostlery is located directly opposite the Southern Pacific Company's depot. The building is constructed of brick, it is two stories in height, and is comparatively secure from all danger of fire. The rates per day, at the Hotel Medford, are from $1.25 to $2. Courteous treatment of guests and an excellent table service are prominent features connected with the management of this hotel. Traveling men, and tourists especially, have found Medford's hotel accommodations better than the average, probably for the reason that the location of the town is such that a large surrounding country is more accessible from this point than from any other.

One of the prominent citizens of Medford, and Jackson county, is D. H. Miller, who has lived in the Rogue River valley since 1876. Mr. Miller, although a comparatively young man, is the pioneer merchant of Medford, having been the first man to engage in business at this point. He first opened a store here nearly 10 years ago. He is a prosperous hardware merchant, and seems to have the utmost confidence in the future growth and development of Medford and the Rogue River valley.



ROCK POINT, ROGUE RIVER.

The present postmaster at Medford is J. S. Howard, who has lived in Jackson county since 1860. Mr. Howard is a civil engineer by profession, and he made the preliminary survey through Southern Oregon and Northern California for the Southern Pacific railroad. Jackson county was but sparsely settled at that time, and Medford had not yet been heard of. Mr. Howard thinks, however, that the development which this section of the country has had during recent years will be greatly increased in the future, owing to the natural resources of the district that, until recently, have been scarcely known.

Jacksonville, Oregon.—Jacksonville, the seat of Jackson county, is the oldest town in Southern Oregon, and one of the oldest established places in the state, having been first settled in 1851. It is five miles west of Medford, the nearest point on the main line of the Southern Pacific railroad, with which place it has direct connection by means of a steam-motor line. When the Southern Pacific railroad was being built through this part of the state, 10 years ago, the people of Jacksonville refused to raise a bonus of $25,000 demanded by the railroad company to insure the main line of road passing this point. In refusing to accede to the demands of the railroad company at that time, the people of Jacksonville missed the greatest opportunity that was ever afforded them to advance their town's interests, and the result of this refusal was a general decadence in Jacksonville's former prestige in favor of Medford, which is now one of the most prosperous towns of Southern Oregon.

The present population of Jacksonville is about 900. The main dependence of the town for support is on the agricultural and mineral resources of the country adjacent. This part of the state has long been noted for its heavy output of gold, and while mining is not today carried on as extensively here as it was before the era of railroads, the gold output of the mines here is still heavy. During 1892 the bank at Jacksonville handled about $150,000 in gold dust. The Sterling Mining Company has put in a plant at a point seven miles distant from Jacksonville, and the output of this company's mine is reported to be very satisfactory. Placer mining claims the principal attention of the miners of this section, the quartz veins here being but little worked up to the present time.

The business interests at Jacksonville are principally in the hands of the men who settled here many years ago. The people lead a happy and easy existence, and no great disposition is shown here to encourage immigration. The country around Jacksonville is rich and is capable of supporting a much larger population at this point than is now found here.

Public school at Jacksonville is taught in a four-room building. Four teachers are employed in the school, and the average daily attendance of scholars is 175. In addition to the public school, the Catholics conduct a private school which is attended by about 40 scholars. The Presbyterian, Methodist and Catholic denominations own church buildings at this point. The Jackson county courthouse, erected at Jacksonville about 10 years ago at a cost of $40,000, is a large, handsome and conveniently

arranged structure, and it is one of the finest buildings in Southern Oregon. Jacksonville supports one weekly newspaper, *The Times*, one hotel and a single livery stable. The assessed valuation of town property is $150,000 and the bonded indebtedness is less than $10,000.

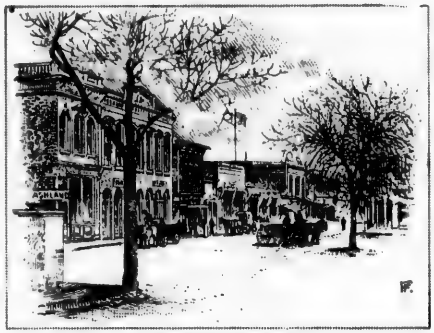
Jackson County and the Rogue River Valley, Oregon.—Jackson county is bounded on the north by Douglas and Josephine counties, on the east by Klamath, and on the south by the California state line. Its total area is 1,809,200 acres, all but 200,000 acres of which is surveyed land. The population of the county at the present time is about 11,500. The surface of the county may be divided into three great divisions, as follows: the mountainous, the hilly and the level lands contained in the valleys. The higher elevations of the county, embraced in the mountainous portion, are of value principally for stock grazing. The lower elevations contained in the hilly portion of the county are covered with dense forests of timber, and the low lands contained in the valleys are highly fertile and will produce anything indigenous to the temperate zone, and all fruits or plants of a semi-tropical nature attain the highest state of perfection in these rich valley lands. The character of the soil varies in different parts of the county, and it is not an unusual thing to find several different kinds of soil on a farm of even 160 acres in this part of the state.

The best part of Jackson county is contained in the famous Rogue River valley, the most productive part of Southern Oregon. This valley is about 35 miles in length and maintains an average width of about 20 miles. It occupies the central part of the county and is crossed by the main line of the Southern Pacific railroad, which furnishes excellent transportation facilities to the farmers of this section. The valley derives its name from the river of the same name, which flows through it. Other important streams, which drain a large area of the valley, are Bear, Little Butte and Sam's creeks. The soil of the Rogue River valley is especially adapted to diversified farming. The climate is practically the same as that of Northern California, the frigid winter blasts which sometimes sweep down over Eastern Oregon being tempered here by the warm moist breezes constantly blowing here from the ocean.

The Rogue River valley is essentially a fruit-growing belt. All kinds of semi-tropical fruits do well here, and the Portland market is principally supplied with peaches, melons and other fruit of this nature from this famous fruit district. Near Jacksonville are a number of very fine vineyards that are kept in a high state of cultivation, and wine made from the grapes of Southern Oregon vies in quality with some of the best productions of California wine producers. All the cereals, including wheat, rye, oats, barley and corn, yield large crops on the lands of the valley. The bottom lands of the valley are used largely for the growing of timothy, clover and blue grass. Alfalfa produces here from two to four good crops without replanting.

For the past 30 years gold hunters have found the mountainous districts of Jackson county attractive fields for prospecting. Placer mining claimed the whole attention of the early miner in this section. Valuable discoveries of gold quartz ledges have recently been made in the county. Capital has been interested in these mines and large stamp mills are now being constructed to work the mines on an extensive scale. The future of the mining interests of Jackson county, as of all of the mining centers of Southern Oregon seems brighter today than it has ever been before.

Ashland, Oregon.—Ashland is the largest town in Jackson county, the population of the place today being a little more than 2,000. It is picturesquely located near the southern extremity of Rogue River valley. South and east lie a high range of hills, while north and west of Ashland extends a second elevation, which contains some of the most fertile patches of Southern Oregon. The town itself conforms to the general unevenness of the surface of the land at this point, and the irregular streets of the place, lined on both sides with handsome structures and substantial brick business blocks, impart to Ashland an appearance as unique as it is interesting to the visitor. On the slopes of the hillsides adjacent are many pretty villa residences, and from these sites a view of Ashland and the Rogue River valley is commanded that shows this section to the best possible advantage.



MAIN STREET, ASHLAND.

Ashland is on the main line of the Southern Pacific, 343 miles south of Portland and 430 miles north of San Francisco. It is the central division station between the two largest cities of the Pacific coast. Ten miles south of Ashland the Siskiyou Mountains rise abruptly to an elevation of 8,000 feet. Ashland creek has its source in these mountains. It is a stream which carries a considerable volume of water, and rushing down the mountain sides with irresistible force, it furnishes ample power for all manufacturing purposes in the city itself. Water for domestic use in the city is taken from this creek, and this water is of the purest quality. This stream already furnishes power for running a five-stamp quartz mill, a large flouring mill, two sash, door and blind factories, and the electric light plant at Ashland. All classes of mercantile business are well represented here, and the local houses carry stocks of goods larger and more complete than are usually found in a town of the present population of Ashland. The large dry goods store of Messrs. D. R. & E. V. Mills, and the furniture store of J. P. Dodge, the latter of which carries a stock of goods valued at about $6,000, are notable examples of Ashland's activity as a business center.

Ashland takes a pardonable pride in the excellent system of public schools maintained here. Three well designed school buildings furnish ample accommodations for school purposes. Two of these buildings are located respectively in the north and south end of the city, while the third provides room for the scholars of the central district. The schools are divided into primary, secondary, grammar and high school departments. The schools are in charge of a principal, under whom are nine assistant teachers. All of the teachers in the public schools here hold the highest grade of Oregon state school certificates.

The people of Ashland enjoy the benefit of a perfect system of arc and incandescent electric lights. The city also has a good water-works system, and a well organized fire department. Prominent among the fine buildings of the city are a new two-story brick city hall, a three-story brick opera house, and the Hotel Oregon. This latter building is a handsome three-story brick edifice, constructed at a cost of

$30,000, by a local stock company. Ashland, in addition to the Hotel Oregon, contains two other large hotels, and three hostelries of a less pretentious character. A free reading-room is maintained here, as well as a gymnasium. The town supports two good weekly newspapers, *The Ashland Tidings* and *The Valley Record.* Handsome church edifices are owned at Ashland by the Methodist, Presbyterian, Baptist, Congregational and Catholic denominations, and the churches here are well supported.

The country in the immediate vicinity of Ashland is especially adapted to the raising of fruit. Peaches, prunes, plums, pears, apricots, apples of the larger varieties, and blackberries and cherries, of the smaller fruits, do the best here. The Rogue river melon crop has attained a widespread reputation. Hundreds of acres of fine peach orchards are within plain view of the people of Ashland, and every year notes an increase in the acreage planted to peaches in this section. The demand for Jackson county peaches increases with the supply of this fine fruit, and Ashland, as the center of the great fruit industry of the county, has earned the sobriquet of the "Peach-blow Paradise."

HOTEL, "THE OREGON," ASHLAND.

The mining interests of the section of which Ashland is the trading center, are worthy of special mention in the present article. For many years past the rich placer gold fields of Southern Oregon have attracted wide-spread attention. Recently valuable discoveries of rich mineral-bearing quartz have been made near Ashland. The Patton ledge, three miles distant from the city, is now being worked by a party of Portland capitalists under the name of the Ashland Mining Company. A five-stamp quartz mill has been in successful operation at Ashland since November, 1892, and the gold brick turned out of this mill each month since it was started has represented a value of between $6,000 and $6,500. Joseph A. Wilson, of Portland, is superintendent of the mine, and this gentleman is authority for the statement that the width of the vein near the surface of the mine was 18 inches, while at a depth of 385 feet the vein had widened out to 8 feet. This tendency to an increase of width of the vein is noted as the depth of the shaft increases. The Patton ledge is but one of the many paying veins of quartz that have been discovered in the vicinity of Ashland. Near Ashland are also vast mines of granite and sandstone, especially valuable for building purposes. Six miles south of the city a sandstone quarry has been operated for the past three years. Stone from this quarry has been shipped largely to Portland, and much of it has been used in the construction of some of the finest buildings of Oregon's metropolis.

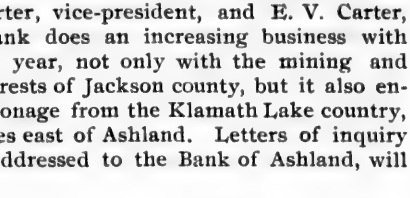
In the immediate vicinity of Ashland are located a number of mineral springs. A value attaches to the waters of these springs second in importance only to the famous Apollinaris. Ten to fifteen miles distant from Ashland are numerous soda springs whose well-known curative properties have justified the expenditure of large sums of money in establishing comfortable places of resort in their vicinity. Within the corporate limits of Ashland are located the White Sulphur springs, at which large bath-houses have been erected, and these baths are regularly patronized by large

BANK OF ASHLAND, ASHLAND

crowds of Ashland's people. The citizens of Ashland are thoroughly awake to the many advantages which their city enjoys, and they are making every effort to build at this point one of the most prosperous centers of population in Southern Oregon.

The Bank of Ashland, an illustration of which is shown on this page, is one of the strongest financial institutions in Southern Oregon. The bank was established in 1884, with a paid-up capital of $50,000, which amount was increased, in 1889, to $100,000, all paid up. The officers of the bank are: W. H. Atkinson, president; F. H. Carter, vice-president, and E. V. Carter, cashier. The bank does an increasing business with each successive year, not only with the mining and agricultural interests of Jackson county, but it also enjoys a large patronage from the Klamath Lake country, which is 60 miles east of Ashland. Letters of inquiry concerning Ashland, and Jackson county, addressed to the Bank of Ashland, will be cheerfully answered.

The Ashland Flouring Mills, located at Ashland, have a daily capacity of 75 barrels. These mills are run by water power, they have a full roller process, and the grade of flour manufactured is considered the best in the market. Besides supplying almost the entire local market, the Ashland mills ship a large part of their product as far north as Roseburg, and as far south in California as Redding. The proprietors of the Ashland Flouring Mills are W. E. Jacobs and W. J. Virgin, both of whom are thoroughly practical flouring mill men.



ASHLAND FLOURING MILLS, ASHLAND.

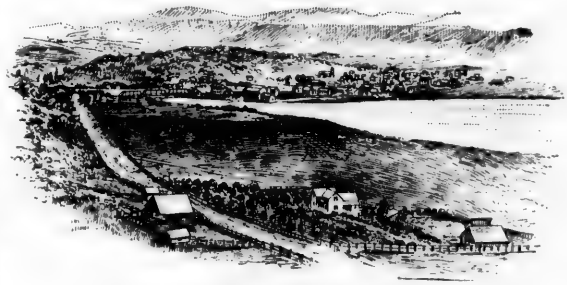
Real estate in Ashland, and farming lands in the immediate vicinity, are held at reasonable prices when the natural advantages and developments already made are considered. Mr. G. F. Billings, an enterprising real estate agent of Ashland, is authority on realty values throughout Jackson county, and he is a thoroughly reliable gentleman from whom to obtain information concerning this section of Southern Oregon.

Klamath County and Klamath Falls.—Klamath county in Southern Oregon is a very interesting section of the State. It maintains an average elevation of about 4,000 feet above sea level. It is situated 130 miles from the Pacific ocean, on the eastern slope of the Cascade range of mountains. It has an area of almost 6,000 square miles.

The resources of Klamath county are varied and abundant. The timber land, which is covered with a dense and valuable growth of sugar pine and cedar, comprises about 1,500,000 acres. The area of the grazing lands of the county is over 500,000 acres and that of the agricultural land is about equal to that of the grazing

district. The Klamath Indian reservation situated in the northern and western portions of the county contains 500,000 acres, which is about equally divided between timber and grazing lands. There are about 1,000 men, women and children in the Klamath tribe which is one of the most intelligent and industrious tribes of Indians on the continent. On the reservation are two well-conducted schools in charge of the United States government. A complete survey of the lands of the reservation has just been made and the people of Klamath county are exerting every effort to have the lands allotted in severalty to the Indians by Congress and the remainder thrown open to settlement. When this is accomplished the agricultural and timber wealth of Klamath county will be materially increased.

The three most important valleys of Klamath county are the Great Klamath basin, at the head of which is situated the county seat, Klamath Falls, until recently called Linkville, Wood river and Sprague river. Each of these valleys is coursed by a river which bears the name of the valley through which it flows. Klamath basin is a magnificent stretch of agricultural land. It presents an interesting view when first seen from the summit of the hill near Keno, on the road to Klamath Falls from the Southern Pacific railroad at Ager. It has the appearance from this point of a great basin, all but round and almost surrounded by hills which seem to form its sides. The area of Klamath basin is almost 100,000 acres. The land here is as level as a floor and is coursed by the beautiful Klamath river, which from Klamath Falls to Keno is navigable for vessels of light draft. A short distance below Keno the river reaches the Cascade Mountains and from this latter point the river begins a rapid descent into the Pacific ocean. Klamath basin, as before stated, is a fertile belt of agricultural land. The climate and soil of this basin are admirably adapted to the raising of cereals of all kinds, grasses, vegetables and fruits of the hardier varieties. The Wood River and Sprague River valleys are smaller in area than is Klamath basin, but are similar in characteristics.



VIEW, KLAMATH FALLS.

Klamath county contains several lakes, the most important of which are the Upper and Lower Klamath. The former is 30 miles long, with an average width of eight miles. It is navigable for its entire length. The latter is approximately the same in dimensions and extends south into the lava beds of California. Crater Lake, situated in the mountains to the west, is probably the most remarkable freak of nature of the kind in the world. It is situated at an altitude of 6,300 feet above the level of the sea. It is eight miles long by six miles wide. Its depth is 1,996 feet. It is enclosed within vertical walls which vary in height from 1,000 to 2,200 feet. The water of this wierd lake is clear, cool, pure and sweet. It has neither visible inlet nor outlet. It occupies what is the crater of an extinct volcano. The climate of the section of country in which the lake is located is perfect. It is a section of

great scenic attractions. It is a sportsman's ideal paradise. Trout in the neighboring streams are abundant, good deer hunting is found in the surrounding hills, and large numbers of tourists are now annually attracted here every summer. Klamath county is well supplied with water, This is invaluable to the interests of a section where stock raising is the principal pursuit of its occupants. In addition to the rivers already mentioned are a number of smaller streams which drain the less important valleys of the county. Of these streams, Lost river is perhaps the most important. It heads on the southern boundary line of the state, makes a circle of 80 miles and empties into Tule Lake, but 12 miles distant from where it takes its source. Tule Lake has no surface outlet. It is from this that Lost river derives its name.

KLAMATH FALLS.

The population of Klamath county is about 3,000. For lack of rail communication the farmers of the county have been compelled to devote their principal attention to the raising of stock. This industry here, however, has proved highly profitable. It is estimated that the present number of cattle in Klamath county is 20,000. In addition the county contains 7,000 sheep and from 6,000 to 7,000 horses and mules. California furnishes a good market for the stock raised in Klamath county. The drive to the Southern Pacific railroad from the stock ranges of the county is less than 75 miles. This is over a well watered and good grazing country, so that cattle do not suffer the least in making the trip.

Klamath Falls, or Linkville, is a town attractively situated in a sheltered cove of the foothills on the eastern slope of the Cascade Mountains and on the banks of Link river. In front of the town flows the Klamath river, which at this point has widened out, giving it the appearance of a lake. For many years the settlement of Klamath Falls was a mere government trading post for furnishing supplies to the troops of the government stationed at Fort Klamath, now abandoned. The old fort was 25 miles west of the present town of Klamath Falls. The town has now attained a population of about 700. The location the town occupies is one of many natural advantages. It is the natural gateway to all the vast territory known as Southern and Southeastern Oregon. Link river, on the banks of which it is located, affords a magnificent water power for manufacturing industries. The extent of this power is better appreciated by the statement that the river has a fall of 60 feet here in a distance of less than three-fourths of a mile. At present this power is utilized only for running one flouring and one sawmill.

DRIVING CATTLE TO MARKET, KLAMATH COUNTY.

Klamath Falls is an incorporated town and is a prosperous center of population.

BALDWIN & REAMES, K

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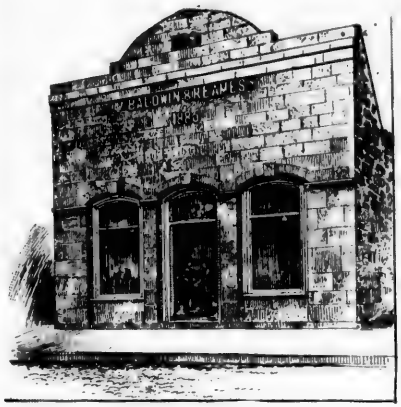
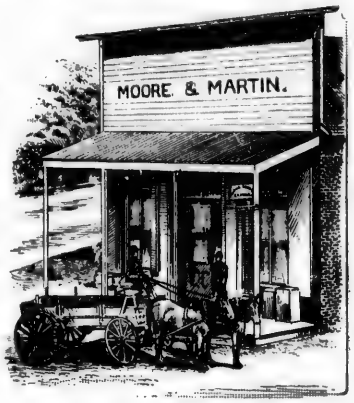


BALDWIN & REAMES, HARDWARE STORE, KLAMATH FALLS.

There are two large general merchandise stores established here, one of which is conducted by Messrs. Moore & Martin, and the other by Messrs. Baldwin & Reames. These two stores do a business amounting to from $60 000 to $75,000 a year. Every line of mercantile business is represented at Klamath Falls and the town bears every evidence of thrift and enterprise. The public schools are conducted in a large handsome frame building and the best of discipline is maintained in these schools. The best of instruction is provided. The school is in charge of three competent teachers. The number of scholars enrolled during the past year was 120. The Presbyterian is the only religious denomination owning its church building at Klamath Falls. A well drilled company, Troop B, of the O. N. G., is maintained here. Two sprightly weekly newspapers, *The Klamath Star* and *The Klamath Falls Express*, are published at this point. The Masons and United Workmen are the secret orders which maintain chapters at Klamath Falls. Two hotels and two livery stables furnish good accommodations to the traveling public here.



MOORE & MARTIN'S GEN'L MDSE. STORE, KLAMATH FALLS.

The assessed valuation of property at Klamath Falls is $150,000. A natural attraction that is found in the vicinity of the towns is a series of hot mineral springs. One of the largest of these discharges 800,000 gallons of water daily, of a temperature of 200°. These waters have been analyzed by an expert chemist and found to possess the following mineral properties: bases—soda, lime, magnesia and iron; acids—sulphuric, muriatic and silicic. The waters are effective in diseases arising from impurities of the blood and for various other complaints. A bath house has been erected near Klamath Falls and it is liberally patronized. The climate of Klamath county is equable, no extremes of either heat or cold being experienced

SECOND CROP ALFALFA, KLAMATH CO.

here. The physicians of Klamath Falls are authority for the statement that it is the most healthful portion of the state. The people of the town are progressive. They invite immigration of a desirable class. The man of small means will find no trouble in providing himself with a productive farm in the county with the outlay of a very small amount of money. Lands here are cheap, and Klamath Falls people take pleasure in aiding the stranger in seeking a desirable location here. The town is at present 55 miles distant from a railroad. A daily stage line is in operation between this point and Ager, on the Southern Pacific railroad. This line also extends beyond Klamath Falls to Lakeview. The town of Klamath Falls can also be reached from the Southern Pacific railroad at Medford or Ashland, Oregon. It will not be long in the future until Klamath Falls will have the advantages of direct rail communication with the rest of the world. A project is now on foot to build a road to this section from the Southern Pacific railroad at Medford. This line would tap rich forests of sugar pine, a most valuable timber, and it would open one of the finest parts of Oregon to settlement. The project of building this line has already assumed something of a definite shape, and that it will be built is a certainty in the minds of those who know anything of the varied resources of Klamath county and the many inducements for building a railroad into this favored part of Oregon.

Lake County and Lakeview, Oregon.—A section of Oregon of which but comparatively little is known, owing its remoteness and inaccessibility from the railroad is, Southeastern Oregon. This part of the state, however, is rich in natural resources, and it will not be long in the future until it will begin to attract serious attention from the immigration pouring into the West.

LAKEVIEW, OREGON.

Lake county, so called owing to its being the center of the great lake district of Southern Oregon, is perhaps the most favored section of this part of the state. Twenty-five years ago this section was occupied by not to exceed 10 white persons, who had braved the hardships and privations incident to settling in a new country. These men, thus early even, saw a future for Southeastern Oregon, as had the early settlers discounted the possibilities of the Willamette valley. From this early vanguard of civilization the population of Southeastern Oregon has steadily increased until it is now about 3,000. The section of country in which these people live is prosperous, the principal towns are the centers of culture and wealth and the developments of these give every indication of a progressive and intelligent people.

Lakeview, the seat of justice of Lake county, is reached from the town of Ager just south of the California line on the Southern Pacific railroad. The route which is covered by stage presents a great variety of scenery. Some of the views commanded from the higher elevations of the mountains crossed by the stage on this journey are truly majestic in their grandeur, while the beauties of the road on the lower levels of the valleys appeal strongly to the traveler over this route.

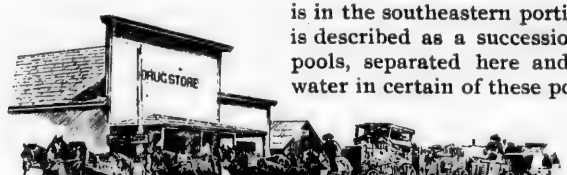
Lake county today is by no means a wilderness. From its remoteness one might reasonably expect to find here a civilization not so far advanced as is noted among

the people of the more accessible portions of the West. The people of the towns of this section are in just as close sympathy with the outside world as are the best informed people of Portland. The leading papers of the country find a large sale at Lakeview and Linkville in this section. The well-to-do people of these towns have fine homes which are often elegantly furnished, and that the people are readers is attested by the many fine private collections of books which are found in private residences here. There is a warmth of welcome to strangers in these settlements remote from railroad lines that is lacking in towns more easily reached, and it can be safely stated that no traveler ever visits the leading towns of Southeastern Oregon without regretting when the time of his departure arrives that his stay here could not have been a more protracted one.

Lake county, as before stated, is the center of the great lake district of Southern Oregon. On account of the large surface area of water exposed here, together with the elevation of the section, which is from 4,000 to 5,000 feet above sea level, the rainfall here is far in excess of what it is in other parts of Oregon lying east of the Cascade range of mountains. Lake county is bounded on the north by Crook, on the east by Harney, on the west by Klamath, and on the south by the California line. The lake district here is one of the most interesting parts of the coast. The lakes in Lake county have no visible outlets, and in consequence their waters are somewhat brackish. The largest of the chain of lakes here is Goose Lake. Almost half of the body of this lake lies south of the California line. Its greatest area from north to south is about 50 miles. From east to west it is about 15 miles. On the east side of Goose Lake, extending for its entire length, is one of the most fertile strips of agricultural land in the Pacific Northwest. This constitutes the famous Goose Lake valley. This is at the present time the most thickly populated section of Lake county. Goose Lake has no surface outlet and it does not overflow except during unusually wet springs. Its waters are comparatively fresh and they teem with the choicest varieties of game fish. The character of the country on the west side of Goose Lake is for the most part abrupt, rugged and mountainous, but it is covered with a dense growth of the finest timber.

Twenty-five miles north of Goose Lake is Lake Abert. Twenty miles northwest of the latter lake is Summer Lake. There is much of interest in the peculiar formation of Lake Abert. It is oblong in shape, and has a surface area of perhaps 60 square miles. The basin which the lake occupies is formed by a fault in the surface rock, so that while the bottom of the lake slopes gradually from the west, its eastern shore-line rises abruptly to an elevation of 1,000 feet. The water of this lake is intensely brackish. It is said to contain in solution carbonate of soda and glauber salt. Summer Lake has an area almost equal to that of Lake Abert. From the eastern shore of this lake a broad, level and fertile stretch of agricultural land extends out for some distance, while the country lining the western and southern boundaries of the lake is of a mountainous character. This lake has an outlet, and its waters do not, therefore, contain so much chloride of sodium as do those of Lake Abert.

South of Lake Abert is what is known as the Chewaucan country, a large tract of valuable agricultural land, which, at the present time, is used principally for stock-raising purposes. A few miles northwest of Summer Lake is another small inland body of water known as Silver Lake. Beyond this latter body is a large area of marsh and meadow land, which is rapidly filling up with settlers. Warner Lake



FREIGHT TEAM FROM AMEDEE TO LAKEVIEW.

is in the southeastern portion of the county. This lake is described as a succession of smaller lakes, or large pools, separated here and there by marsh plats. The water in certain of these pools is totally absorbed during the summer months. After the water has evaporated the residium is a thick crust of salt, which is used by the ranchmen of this section for their stock. Warner valley is a long, narrow defile, with precipitous walls on either side. It is 60 miles long by about 8 miles wide at its greatest width.

Lake county is one of the largest counties in the state, it having an area of about 8,000 miles. At least one-third of the county is susceptible of a high state of cultivation. The remaining two-thirds of the county consists of broken land, but thousands of acres of this afford excellent pasturage for horses, cattle and sheep. Some of the hills of the county are covered with a stunted growth of timber, while on some of the other elevations are large and valuable bodies of sugar pine and cedar, which will furnish an ample supply of timber to meet the local demands for many years in the future. The farming lands of Lake county are chiefly located in the valleys already described. The character of the soil of these lands is a rich, black loam, and it produces abundant yields of all kinds of cereals and garden produce without the aid of irrigation. The hardier fruits and vegetables of all kinds do well here.

Until rail connection is made between the settled districts of Lake county and the outside world, stock raising will be the principal industry of the county. Grain for the outside markets, at the present time, cannot be successfully raised here. The stock interests of this county are beginning to assume great magnitude, and the revenue derived from this source is sufficient to make the population of Lake county one of the most prosperous communities in the Pacific Northwest. A few figures will justify the truth of this assertion. At the present writing there are estimated to be on the grazing lands of Lake county 30,000 horses, 75,000 head of cattle, and 250,000 head of sheep. This county annually exports 1,750,000 pounds of wool. Lake county mutton and beef regularly find a large sale in the Portland and San Francisco markets.

The public domain in Lake county consists of swamp, wagon-road and government lands. There are large bodies of swamp lands, the title to which has not yet been confirmed. The wagon-road grants of the county are also in an unsettled condition, but it is probable that these will soon be thrown open to entry under the homestead law. There are still some fine bodies of agricultural land in the county which are unoccupied, and which are subject to settlement under the laws of the United States. The exact number of acres of surveyed and vacant lands in Lake county is 2,626,187. The climate of this part of the state is a delightful one, and with the advent of a railroad line this will become one of the most important parts of the state.

The chief trading center for Southeastern Oregon is Lakeview, the seat of justice of Lake county. It is a wide-awake little town of about 900 population. It is situated

near the head and on the east side of Goose Lake valley, about four miles distant from Goose Lake. The town is incorporated, and enjoys an excellent municipal form of government. One of the five United States land offices of the state is located here. The receiver is Mr. C. U. Snider, and Dr. J. W. Watts is the register. Both of these gentlemen are pioneers in the state, and they are both regarded as most efficient officers. The district under the jurisdiction of this office embraces all of Klamath and Lake counties, half of Harney and Malheur counties, and a portion of Crook county.

Lakeview boasts of a number of substantial and attractive-looking buildings. Among these may be mentioned the court house, a public school which cost $14,000, and a handsome brick bank building. The Lakeview bank is a strong financial institution, and enjoys the confidence of a wide patronage. It has a capital of $75,000, and a rapidly increasing surplus. A. McCallen is the successful manager and cashier of this bank. Prominent among the business houses of Lakeview may be mentioned two hotels, two livery stables, a brewery, and perhaps a score of general merchandise and other stores. *The Lake County Examiner*, of which Messrs. Townsend & Beach are publishers, is one of the most progressive interior publications of the state. The fraternal and social organizations are represented at Lakeview by lodges of the Odd Fellows, Masons, United Workmen and Grand Army of the Republic. The Baptist and Methodist denominations have comfortable church buildings at this point. Lakeview offers superior educational advantages. The Lakeview State Graded School provides courses of study in the common, high school and normal branches, as well as instruction in vocal and instrumental music. The school is now a sectarian one. The state has provided ample means for the purchasing of the necessary apparatus for the institution in illustrating the physical and natural sciences. The corps of instructors is composed of four well qualified teachers.

STATE GRADED SCHOOL, LAKEVIEW.

Lakeview has a good water-works system, together with good facilities for fighting fire. Near the town are established three sawmills, one roller-process flour mill, a lime kiln and several ledges of valuable building stone. A mile and a half south of the town are two boiling hot springs which are said to possess mineral properties. Bath houses have been erected near these springs for the accommodation of those who may be desirous of testing the healing powers of these mineral waters. Forty miles north of Lakeview is the village of Paisley, which is situated in the Chewaucan country. Summer Lake is a trading post 25 miles to the northwest of Paisley. Silver Lake is a small settlement 30 miles still further north. Fifteen miles south of Lakeview, on the state boundary line is New Pine Creek, another small trading point.

The railroad question is a vexed one to the people of Lakeview and Lake county. It is one, however, that promises an easy solution within the near future. The Union Pacific has already made surveys for a line through the county. This would probably be its northern California extension. Reference to any map of the

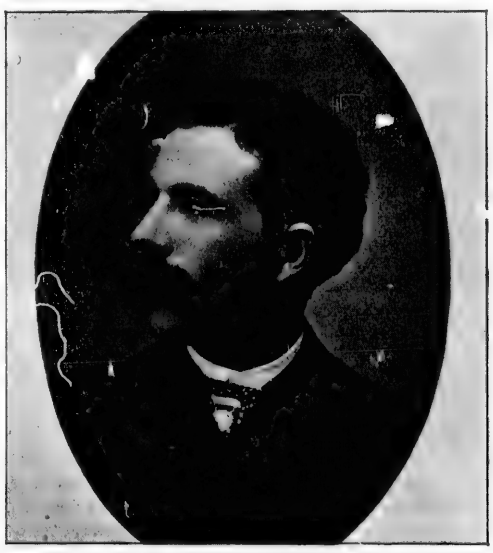
Pacific Northwest should be made to enable the reader to fully appreciate the absolute certainty of one or more of the transcontinental lines building through Lake county in the near future. This would make a most feasible route from the north through Oregon and California to San Francisco on the south. It is a well known fact that James J. Hill of the Great Northern is biding his time when he will be able to enter California with his road. Mr. Hill is too shrewd a railroad builder to parallel the line of the Southern Pacific west of the Cascades in selecting a route south. In going south he will undoubtedly select a less expensive route than is afforded in the country crossed by the Oregon branch of the Southern Pacific, and in building through Lake co[illegible] will open up a new and wonderfully rich section of country where he will not h[illegible] meet competition. It is felt by those who have carefully studied the situation that he will build south from the line of the Great Northern at Butte, through Idaho and Southeastern Oregon. Mr. Hill is thoroughly familiar with the easy grades and the inexhaustible resources of the country along this route and these will prove a most important inducement for him to select this route when he finally decides to enter the California field. Lake county and Lakeview offer exceptional opportunities for trade to the merchants of Portland, and a railroad that would reach this country from some point on the Southern Pacific this side of the Siskiyou Mountains would prove a most important investment from the standpoint of Portland's best business interests.

HON. C. A. COGSWELL.--As stated in the article on Lake county and Lakeview, 25 years ago there were scarcely more than 10 residents in what is now Lake county, Oregon. Hon. Charles A. Cogswell, the distinguished senator in the last three sessions of the Oregon state legislature from the remote southeastern part of the state, was one of the 10 hardy pioneers above referred to. Senator Cogswell was a mere youth with but $25 in his pockets when he decided to brave the hardships of a frontier life in the then wilds of Southeastern Oregon. He hailed from Vermont, where he was born in 1844. His parents removed to Iowa in 1857, where he received the benefit of a common school education. During the war with the South, he fought under Gen. Sherman's command, and subsequently removed to Goose Lake valley, in Lake county, Oregon, where he has since resided. For 25 years Senator Cogswell has striven, and not in vain, to bring about a development and civilization of one of the most remote corners of the continent. The results

HON. C. A COGSWELL, LAKEVIEW.

have been worthy of his indefatigable and well-directed efforts. After the rough corners of his frontier existence had begun to wear smooth, Senator Cogswell took up the study of the law, and was admitted to practice in the Oregon courts. In 1887 he was elected to the office of judge of Lake county. In 1888 he received a flattering majority for state senator and was re-elected to the same office in 1892 by double his former majority. During his term in the senate, Mr. Cogswell was a leading spirit, and many of the important measures that became laws during that session originated with him. He received the Democratic vote of the members of the Senate for the office of president of that body, and he was made chairman of the committee on federal relations. The name of Senator Cogswell is often mentioned in connection with the gubernatorial honors of the state, but this has been done without his sanction. Senator Cogswell is now the mayor of Lakeview. He enjoys a most lucrative law practice besides having large stock as well as other interests in Southeastern Oregon. He is a man of marked ability, an ardent Democrat in politics and he is honored by an admiring constituency from both parties alike.

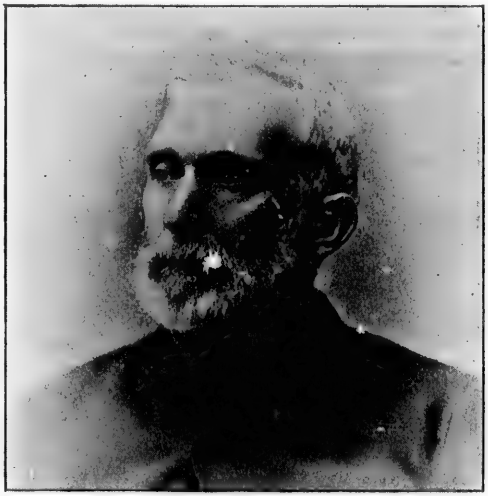
HON. BERNARD DALY, M. D.—There was probably no more distinguished member of the house of the last legislature than Dr. Bernard Daly, the representative from Lake and Klamath counties. Dr. Daly is a native of Ireland, having been born there in 1858, but he was raised in the state of Alabama. He received a thorough preliminary education in his youth and graduated from the Ohio Normal University at Ada in 1886, and from the Medical Department of the University of Louisville in 1887. During the latter year he took up his residence at Lakeview, where he began the practice of his profession in which he has met with signal success. Although hailing from a somewhat remote part of the state, Dr. Daly has always been indefatigable in his efforts in behalf of Southeastern Oregon. He was elected to the last legislature by a most flattering majority and he served his constituents in a most able manner. Although on the side of the Democratic minority, Dr. Daly was a leader and many of the important measures introduced and enacted are to be traced to his sagacious efforts. Dr. Daly's interest in behalf of education led to his appointment as a member of the board of regents of the Oregon State Agricultural College at Corvallis, the position made vacant by the death of Hon.



HON. BERNARD DALY, M. D., LAKEVIEW.

W. S. Ladd, of Portland. Dr. Daly is a most prominent citizen of Lakeview and is untiring in his efforts to make Southeastern Oregon one of the most important agricultural sections of the state.

HON. W. M. TOWNSEND.—The name of Hon. W. M. Townsend has been prominently identified with the growth and development of the Willamette valley, in Oregon, for the past 30 years. Judge Townsend was born in the state of Indiana in 1839, where he received a common school education. Early in life he became imbued with a desire to go west, and in 1855 he settled in Kansas. Ten years later the Pacific coast proved a more inviting field for the man of push and ambition, and Judge Townsend removed to Yamhill county, in Oregon. During his stay in Kansas he enlisted in the 15th Kansas regiment and served with honor during the civil war. In 1870 Judge Townsend was elected a member of the Oregon legislature and in 1874 he occupied a seat in the Senate along with such men as Dolph, Hirsch, Watson, Meyers and Cochran. During his term as senator, Judge Townsend was made chairman of the committee on ways and means. In 1878 he was elected judge of Yamhill county. Judge Townsend has always been a partisan democrat and in recognition of his ability as a leader and expounder of the principles of democracy, he was chosen by the state central committee in 1880 and 1884 to canvass the state for Hancock and Cleveland respectively. In 1878 Judge Townsend adopted journalism as a calling and established *The Oregon Register* at Lafayette. In 1885 he was appointed by Cleveland receiver of the land office at Lakeview where he has since resided. Judge Townsend enjoys the honor of having been the first mayor of Lakeview, to which position he was elected in 1888. He now holds the office of judge of Lake county, and he also finds time to edit one of the most sprightly weekly newspapers in Oregon, *The Lake County Examiner*. Judge Townsend is well-known throughout the state and is a man of recognized ability. In 1878 he declined the nomination for governor of the state and in 1884 he received the complimentary vote of the democratic minority in the legislature for United States senator. Judge Townsend has unlimited confidence in the future development of Lake county and Southeastern Oregon and no one man is doing more than he is to aid and hasten this rapid development.



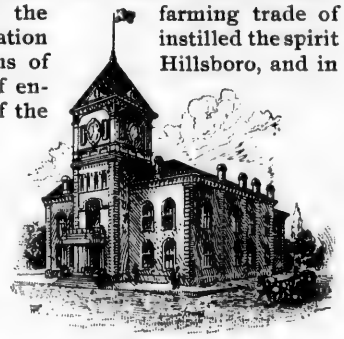
THE LATE HON. W. M. TOWNSEND, LAKEVIEW.

Just as "The Handbook" is going to press word reaches THE OREGONIAN that

Hon. W. M. Townsend, the subject of the above sketch, is dead. Judge Townsend was one of the best known and most highly respected citizens of the state, and his death will be mourned by his numerous friends and admirers in all parts of the coast.

Hillsboro, Oregon.—Hillsboro is 15 miles west of Portland, in an air line, but by the usual means of travel between the two places—the West Side division of the Southern Pacific railroad—it is 21 miles distant from Oregon's metropolis. It is the county seat of Washington county, and contains a population of about 1,800.

The town itself gives every evidence of thrift, and it is most pleasantly located. The growth of the place from a mere hamlet has been made within a very short time past. Four years ago Hillsboro did not contain to exceed 800 people. The cause of this rapid growth can be traced to the impetus given the town by the organization of the Patrons of Husbandry, a granger corporation, but in no way identified with the Farmers' Alliance. The Patrons of Husbandry erected at Hillsboro a brick block and established a general merchandise store under the name of the Hillsboro Co-operative Company. This largely increased the farming trade of the town, and the initiative taken by this organization instilled the spirit of progress into the minds of the leading citizens of Hillsboro, and in less than three years after the first great stroke of enterprise was made by the Patrons, the population of the place had more than doubled.



COURT HOUSE, HILLSBORO.

Hillsboro boasts of two large flouring mills, both in operation. One of these mills makes a specialty of the manufacture of oatmeal, which finds a ready market in all parts of the coast. In addition to these mills, the town also contains a large warehouse which furnishes ample and convenient storage for the farmers of the vicinity.

Three new churches have been added to the town of late years. The Methodist, Baptist, Congregational and Christian denominations contain very strong memberships. The educational facilities of Hillsboro have never been neglected. A well graded school of 450 pupils is conducted in a fine school building, erected at a cost of $14,000. The school contains seven grades, with a teacher at the head of each.

The town contains 16 brick stores, and the leading mercantile and professional pursuits are carried on with profit. A handsomely designed and expensive brick court house occupies a full block in the center of the town. Sessions of both the county and circuit courts are regularly held here.

Hillsboro has good planked streets, electric lights, water works, and every adequate protection against fire. Municipal affairs have been conducted wisely and on a conservative basis, as is evidenced by the statement that the city's indebtedness does not exceed $4,000.

The Southern Pacific railroad furnishes the transportation facilities of Hillsboro at the present writing. Two trains run each way over this line daily, connecting Hillsboro not only with Portland and the East, but also with all points of the Willamette valley. A motor line of road now runs out of Portland part of the way to Hillsboro, and it is probable that this will be completed clear through to the latter

CITY HALL, HILLSBORO.

place during the present year. Two hotels, with rates varying from $1 to $2 a day, furnish comfortable accommodations to the traveling public. The town supports two good weekly publications, *The Independent* and *The Democrat.*

The climate of Washington county is essentially the same as that of the entire Willamette valley. Old age and disease claim their victims here, however, as in every part of the world. Dr. F. A. Bailey, the leading physician, and a prominent figure in the growth of the city, makes a most gratifying report of the healthy condition of Hillsboro's population. The doctor has great faith in the future of the town, and this faith will certainly not be shaken by the future development here.

Owing to Hillsboro's proximity to Portland, city lots and farming lands in the vicinity find a ready sale among careful investors. J. J. Morgan has constantly on hand a large list of all classes of property in Hillsboro and the adjoining section. He has been prominent in almost every enterprise that has been inaugurated in the town during the last 12 or 13 years. He is now a stockholder in the Hillsboro Co-operative Company; he is an officer and a director of the First National Bank of Hillsboro, and he stands deservedly high in the community where he has so long resided. All information furnished by Mr. Morgan on Hillsboro and the tributary district, can be relied on in all cases as strictly accurate and of great value to the seeker for information on this part of the Willamette valley.

MORGAN & BAILEY BLOCK, HILLSBORO.

Washington County.—This is one of the oldest settled, and today it is one of the most prosperous, counties of Oregon. In shape it is nearly square and contains an area of over 300,000 square acres. Of the strictly agricultural counties of the state it is the farthest north and the one which approaches nearest to the sea. It is bounded on the north by the Scappoose Hills, a range maintaining an average elevation of about 1,000 feet above sea level. These hills separate the west side of the Willamette valley from the Columbia river and, skirting the Willamette river on the west, form the eastern boundary of Washington county, separating it from Multnomah. Yamhill county adjoins Washington on the south, while the latter is separated from Tillamook county on the west by the rugged chain of the Coast range of mountains.

The topography of Washington county includes about four-fifths of practically level land, dotted here and there with wonderfully rich beaver-dam marshes, and the remaining fifth is hilly. Of the level portion of these lands perhaps two-thirds might be termed prairie, adapted to the highest form of agriculture, while the remaining third is covered with brush and timber. The hilly portion of the county is all brush and timber. It is the varied nature of the lands of the county that makes them especially desirable for settlement. The mountainous portion of the

county, with its heavy growth of timber, insures an adequate supply of water for the low lands at all seasons of the year, and the timber which is found in these mountains is of the greatest value, both for domestic use and as lumber for export. The most valuable of this timber for commercial purposes are the common fir and cedar found in the higher elevations, as in the mountains of all parts of the Northwest, in practically unlimited quantities. This belt also includes large quantities of white fir, common, or pitch pine, and on the western border of the county is a valuable strip of white pine. Scattered here and there through this timber belt are stretches of hemlock and spruce, some of the trees of the latter varieties often attaining enormous size, heights of 300 feet, or even more, being frequently recorded. In addition to these soft woods is an inexhaustible supply of the finest white oak. This, with the other hard woods found here, will be very valuable in the near future for the manufacture of furniture and other articles of commerce requiring the use of the harder varieties of woods.

Washington is one of the best watered counties of the state. Leading up from the level portions of the county fertile valleys extend for a considerable distance into the hilly sections, dividing these hills in all directions. Down these small valleys flow Rock creek, Dairy creek, Gales creek, Scogging's creek and Patton's creek. These are all mountain streams carrying large volumes of the purest water and offering rich opportunities in the water power afforded for future manufactories. These streams unite near the central part of the county, forming Tualatin river. This latter stream is navigable from Cornelius for a distance of about 40 miles to a point near where it empties into the Willamette river a few miles above Oregon City. Rapids near the mouth alone prevent steamers from entering the Willamette from this stream. Before the railroad was completed through the valley a steamer of 120 tons measurement plied regularly on the Tualatin river from Cornelius, Hillsboro and other points, connecting with the regular steamboat lines on the Willamette by means of a short portage near the mouth of the Tualatin, and also making connection at Oswego, a few miles above Portland, by a similar portage.

The lands of the entire Willamette valley are rich and well watered. Washington county is no exception to this rule. Covering a strong clay subsoil is a carpet of the richest loam, varying in depth from a few inches to many feet. Lands on the Tualatin bottoms are especially rich, the thirtieth yield of wheat having now been raised here with an average yield annually of 40 bushels to the acre. All cereals do well here. One of the great future possibilities of this section is the raising of stock, and dairying. The county is an ideal dairying section, and with practically an entire absence of cold during the winter months, the expense of caring for cattle here is less than in any other part of the Northwest.

Oregon has long been noted for her fine apples and pears. It is just such land as is found in Washington county that produces the finest fruit. The cool nights of the early fall months are especially hard on grapes and peaches, but with the exception of these two varieties all semi-tropical fruits do as well here as in any part of the world. So perfectly adapted are these lands to small fruits, that the flavor of the raspberries and blackberries which grow in endless profusion in a wild state here is not equalled by that of any cultivated fruit of the same varieties in the world. The hills during the summer months are covered with blackberries, raspberries and huckleberries. All kinds of small fruits do well here, and there is no reason why fruit canning on a large scale should not be as profitable in Washington county in the near future as it has already been proved to be in the best fruit districts of California.

Cornelius, Oregon.—Three miles west of Hillsboro, on the line of the West Side division of the Southern Pacific railroad, is located the town of Cornelius, with a population of about 300. A creamery, large wheat warehouse and a rich tributary farming district are the chief dependencies of the place. The town claims a neat church building [Methodist], a substantial building occupied by the public school with an average attendance of about 100 pupils, a single hotel and one livery stable. Before the era of great development in the Northwest, Cornelius had the promise of becoming the junction of the proposed Astoria & McMinnville railroad. This was a line projected by the erstwhile railroad king, Ben Holladay and Colonel Cornelius. The town was named after the latter gentleman. Railroad lines since that time have gridironed the Northwest, cities have sprung up in the wilderness, deserts have been broken up and made habitable, but Cornelius still boasts of a single line of railroad which passes her doors, and Astoria, which had promise of early rail connection more than 20 years ago, is still forced to rely on the open highway of the Columbia and Willamette rivers for her sole means of connection with the rich cities of the interior.

Cornelius enjoyed a considerable degree of prosperity during the two years that the West Side division of the present Southern Pacific line terminated there, but since that time it has allowed rival places to take the lead in municipal development. Since that time no special progress has been made in the place, and Cornelius remains today substantially as Ben Holladay left it more than two decades ago.

Forest Grove, Oregon.—Forest Grove, as its name implies, is a town of sylvan surroundings. The location of the town is a sightly one, at an elevation considerably above that of the country immediately around it, and it is well sheltered by a heavy forest growth which skirts the place on all sides.

Forest Grove is incorporated, and contains a present population of about 1,300. It is on the line of the West Side division of the Southern Pacific railroad, 26 miles south of Portland. Two passenger trains and one freight run daily each way over this line, thus affording ample means of communication between Forest Grove and the big city to the north. In addition to the line of travel afforded by the railroad, Forest Grove also has daily connection with Vernonia and Greenville by well appointed stages.

PUBLIC SCHOOL, FOREST GROVE

Forest Grove has long been noted as the seat of Tualatin Academy & Pacific University, one of the best conducted colleges on the coast. A description of this important seat of learning is published in connection with the present article. In addition to the educational facilities afforded by the college, the town also supports a good public school system with an average attendance of 280 scholars.

The manufacturing industries of the place comprise an arc and incandescent system of electric lighting for the city, a fruit cannery, flouring mill, sash and door factory, furniture factory and creamery. All of the various mercantile houses of any prosperous town are represented at Forest Grove. The place boasts of one strong and well conducted bank, The Bank of Forest Grove, it supports one good newspaper, *The Times*, has two livery stables and three hotels. One of these hostelries, the Forest Grove, owned and operated during the past 28 years by Mrs. S. A. Sloan, is one of the popular institutions of the town, and is regarded as one of the best conducted houses of the valley.

The principal products of the soil of the country tributary to Forest Grove are fruits of all kinds, with prunes in the lead, grain and all varieties of vegetables. Considerable attention has been paid of late years to the dairying possibilities of this section, and it has been proved that this tributary district will give as satisfactory results in dairying as any of the most favored parts of the coast. The country here is also rich in a growth of the finest varieties of timber for commercial purposes, and the lumber industry has already attained considerable prominence in this part of the state.

Forest Grove has four good church buildings, the Congregational, Baptist, Methodist and Christian, each of which denomination boasts of a good congregation. Liberal hall, a large public room, free for all gatherings of a public character, is maintained here. The town is not behind any place in the valley of equal population in enterprise and prosperity, and with the other inland towns of the state it is assured of a solid growth with the certain increase in population and consequent steady addition to the wealth of the country.

PACIFIC UNIVERSITY.—Forest Grove, both by reason of its favorable location and by the intelligence and moral standing of its citizens, is well adapted for the location of an institution of advanced learning These advantages were considered when Tualatin Academy and Pacific University was chartered as an academy in 1848, and later as a college in 1854. That the aim of the founders to maintain a high standard of scholarship has been steadily adhered to, is attested by the character of its alumni, many of whom are numbered among the prominent men of the coast. The institution now stands on a firm financial basis, and in consequence has been enabled to gather to itself an able faculty from the best colleges of the country.

MARSH MEMORIAL HALL, PACIFIC UNIVERSITY, FOREST GROVE.

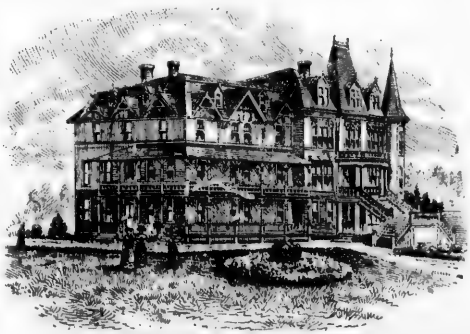
Since the accession of Thomas McClelland, D. D., to the presidency of the institution, in 1891, the faculty has been enlarged and the courses of study revised and strengthened by the addition of elective courses in history, English literature, Latin, Greek, mathematics, chemistry and biology.

The buildings of the school, in addition to those shown in the accompanying illustrations, are the academy, the science building, containing the chemical and biological laboratories, and the young mens' dormitory.

The attendance at the university has materially increased during the past two years, and the prosperity of the institution is apparent in all its departments.

In 1885 a conservatory of music was added, and its liberal patronage shows it to be an attractive and profitable feature of the institution.

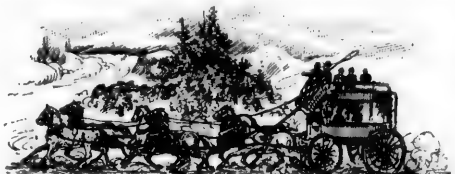
PHOTO. BY MC ALPIN & LAMB, PORTLAND.



LADIES' HALL, PACIFIC UNIVERSITY, FOREST GROVE.

Owing to its liberal endowment, the university is not wholly dependent upon tuition for its support, and in consequence it is able to offer its privileges at a nominal cost.

Over the Coast Range to Tillamook.—As "The Handbook" is intended to serve largely as a guide to tourists visiting the Northwest, it could hardly be said to be complete without some mention of that part of the coast bordering on the Pacific ocean and west of the Coast range of mountains. One of the most important of the coast settlements on the Pacific ocean in the state of Oregon is on Tillamook Bay, the first harbor south of the entrance to the Columbia river. The ride by stage from Forest Grove, on the line of the Southern Pacific railroad, across the Coast range to Tillamook is one of the enjoyable stage journeys of the coast. A description of the ride over these mountains will be read with pleasure by patrons of "The Handbook."



STAGE FROM FOREST GROVE TO TILLAMOOK.

Starting from Forest Grove just at break of day in the comfortable stage furnished by H. D. Jones, the traveler finds enjoyment from the outset of the journey, and this interest increases as the stage enters the mountains. Either Mr. Jones, the proprietor, or his trusted henchman, Joe Bailey, both of whom are experienced whips, handle the reins. For the first few miles out the stage runs smoothly and rapidly along through a level strip of agricultural country with well cultivated farms on either side of the road. The rise to the foothills of the Cascade range begins gradually. The ground from a dead level grows gently undulating. This is the famous Gales Creek country, where land is worth $100 an acre and, as the driver remarks, "it is mighty good soil, too." Several miles west of Forest Grove the little farming village of Gales City is reached. This contains a store, postoffice and half a dozen houses. From this point the stage road begins to grow steeper and the ascent to the Coast Mountains is about to begin. The sturdy pair of mules, called "The Babies," who serve on the first relay, make light work of these preliminary climbs for they are fresh from the stalls and many trips over the same road have, perhaps, led to their making light of the first pull, instinctively reasoning as they do that the hard work is yet ahead on the steeper slopes. The toll gate is soon reached where the sleepy toll-man, for it is still early morning when the stage reaches this point, presents himself in answer to the blast from the driver's horn, collects the fare for the stage, $2, and opens the gate to the famous Wilson River toll road.

The toll road is worthy of more than a passing notice. Its construction involved difficult feats of engineering. It is 47 miles long. It was built by the Wilson River Boom, Tollroad & Improvement Co., incorporated with a capital stock of $250,000. The officers of this company are: W. S. Runyon, president and manager; James Steel of Portland, vice-president, and Claude Thayer, the banker of Tillamook, secretary. The work of the construction of this road was commenced in 1890 by W. S. Runyon, the prime mover in the undertaking. This was after Tillamook county had decided that the expense of building the road would prove too burdensome to the taxpayers. A charter of 30 years' duration was granted to the company.

This included not only the right to collect toll from teams and foot passengers passing over the road, but also a franchise covering the rights of logging on Wilson river. By this logging clause the company is entitled to collect 55 cents for every thousand feet of timber floated down the stream during the term of the lease. Of this amount 50 cents goes to the company and 5 cents to the county. The logging franchise is confined to Tillamook county, but the toll rights cover 41 miles of road in Tillamook county and six miles in Washington county. As before stated, the construction of the road involved great engineering difficulties. The county surveyor estimated in one of his annual reports that the construction of the road would involve an outlay of $15,500. Already about $35,000 has been spent on the road and the work is not yet completed. The time covered by this construction work has been three summers of four working months each, during which time from 30 to 45 men and four teams were steadily employed. The curves, grades and bridge work reflect great credit on Mr. Runyon's judgment, who met the difficulties of construction as they arose. There are 102 bridges on the road and these range from 20 to 282 feet in length. In addition to the bridges are miles of shoring which follow the edges of precipitous hillsides. The road is a safe one to travel in every respect. There is no crib or false work under the roadbed and no danger from landslides can ever be encountered. The principal bridges on the road are the Howe truss. These are of extra strength, and some of these bridges have during the severe mountain storms of winter successfully carried a weight of snow estimated at 220 tons. All canting on the inclines is toward the inside bank and away from the decline, thus avoiding all danger of the stage going over the bank. The rates of toll over this road, considering the heavy expense of its construction, are very reasonable. But $2 is charged for double teams $1.50 for single teams and $1 for horse and rider. The company has never enforced the levy of 25 cents allowed in their charter for foot passengers. This is one of the best driveways in the state and it affords easy access to Tillamook at all seasons of the year.

PHOTO. BY REYNOLDS, TILLAMOOK.

VIEW ON WILSON RIVER.

Fourteen miles west of Forest Grove the summit of the Coast range is reached. This is 1,743 feet above sea level. The view from the summit on the stage road is entrancing. Far to the east can be counted no less than seven snow-capped peaks of the Cascades. These are Mt. Hood, Mt. Rainier, Mt. Pitt, Mt. St. Helens, Mt. Adams, Mt. Jefferson and the Three Sisters. Immediately below to the east lies the fertile valley of the Willamette, one of the garden spots of the coast. As the descent on the west side of the mountains begins, the driver, Joe Bailey, tightens his grip on "The Babies," as the mules are called. The sagacity of the mules is as conspicuous as the accredited stubbornness of this animal. They stop by instinct before crossing a loose timber in a bridge and there is even a suspicion of a hesitancy in their

step at points where the driver is accustomed to dwell with enthusiasm on the merits of some particular bit of scenery along the way. A short distance the other side of the summit the Devils Lake country is reached. This country derives its name from a marshy lake within its limits which shows strange lights on its surface after nightfall. The country is gently undulating, and the soil is as rich as that of the valley land. The stage road crosses numerous creeks near which may be seen the deserted cabin of some homesteader who has proved up on his claim and is now waiting to sell his holding to some syndicate when the big day for timber shall have arrived. There are about 40 of these abandoned cabins along the road. West of the Coast range, magnificent forests of timber stretch away on all sides. Trees from 6 to 12 feet in diameter at the base and 300 feet high grow so thickly in some parts of this great forest that there is barely room for a horse to pass between them. An interesting part of the descent is the "zig-zag" or switchback. The road here to make a descent of 300 feet describes an inverted letter "S" as it winds back and forth down the mountain side. Looking down from the upper road of the "zig-zag" into Sangho canyon, at the foot may be seen the winding Wilson river as it dashes over the rocks, forming innumerable waterfalls in its course. The river fairly teems with mountain trout and 300 fish is said to be a good catch with a single rod during an afternoon's sport here. The trout caught here are immense fish, and every inch of their fifteen inches or more is thoroughly gamy. Thousands of silver-side salmon ascend this stream during the late summer months to spawn, and in the deep pools along the stage road they can be seen swimming in the clear water of the stream. From the bottom of the "zig-zag" to the end of the journey on Tillamook Bay, the road follows the course of the Wilson river, along the banks of which are many fine bits of scenery. Waterfalls varying from 10 to 250 feet in height come constantly within the range of vision of the traveler over this road. All

PHOTO. BY REYNOLDS.

FALL CREEK, WILSON RIVER ROAD TO TILLAMOOK.

PHOTO BY REYNOLDS.

ILER'S FALLS, WILSON RIVER.

along this road are camping spots where camping parties are accustomed to spend the summer. Elk, deer and bear, and grouse, pheasants and the Denny pheasant are found in abundance here, and the fishing in all the streams is good. The names which these numerous camps bear indicate the spirit of abandon which takes possession of the average camping-out party during the period of release from city conventionalities. Among the names noted on the sign boards hung out over these camps are: "Hungry Point," "Buzzard's Roost," "Last Loaf," "Widow's Camp," "Camp Nix—no fish."

The traveler on this stage journey lunches at Walt. Smith's Half-way house, and it is here that the mules are changed for a pair of horses. A can of condensed milk served at a dairy ranch would be no more disappointing than is the fare of bacon and beans which is said to be the usual noonday repast set before his guests by the intrepid foundling of the Smith family at the Half-way house. Right before Mr. Smith's door is a stream alive with trout, yet the inn-keeper has no ambition to fish and his guests have the same lack of ambition to eat his beans when their appetites call loudly for trout. Barring the meal at Smith's the journey by stage from Forest Grove to Tillamook is one replete with interest and pleasure, and its growing popularity with the tourists who annually visit Oregon is rapidly making it one of the best traveled stage routes of the West.

PHOTO. BY REYNOLDS.

LOGGING, WILSON RIVER COUNTRY, NEAR TILLAMOOK CITY.

Tillamook, Oregon.—Tillamook, the judicial seat and chief city of Tillamook county, is beautifully located on the edge of Hoquartan prairie, on an arm of Tillamook Bay, known as Hoquartan slough. This slough pursues a somewhat tortuous course for about three miles before emptying into the bay. It carries a sufficient depth of water to accommodate steamers of moderate draft plying between Tillamook Bay and Astoria.

Tillamook is reached by stage over the Coast range. Stages run from Forest Grove and North Yamhill, on the West Side division of the Southern Pacific railroad, daily, to Tillamook. In addition to the stages, the steamers Elmore, Harrison and Augusta ply between Tillamook Bay and Astoria. The country immediately tributary to Tillamook, although known as Hoquartan, South and Long prairies, is practically one valley, 12 miles in length by 6 miles wide. This valley is the garden-

spot of the entire country. It is almost wholly cleared, and it is thickly settled. The principal industry of this valley is dairying. The products of the farms of this valley seek Tillamook for shipment, and the town has long been recognized as the trading center of a very large section of country.

PHOTO. BY REYNOLDS.

VIEW, MAIN STREET, TILLAMOOK.

Three of the rivers which drain the part of Tillamook county west of the Coast range of mountains empty into the bay near the town of Tillamook. The Wilson river flows past the town to the north, the Tillamook flows to the south, while the Trask barely escapes flowing through the southern boundary of the townsite. All of these are logging streams, and much of the timber floated down them finds its way to Tillamook. The principal trade of the logging camps is handled at Tillamook. Tillamook is one of the old settled communities of the state. The first white settlers came here in 1851-2, and some of these old pioneers are still living to tell of the hardships and isolation which fell to their lot in the early history of the state. The original townsite plat of Tillamook was filed in 1864. It covered at that time a tract about two city blocks in size. The growth of the village was slow, and as late as 1880 the business of Tillamook was handled by two stores, and the population in that year did not exceed 25. In 1888 the town received its first real impetus in growth. In that year the bank of the town was opened, and the first newspaper, *The Tillamook Headlight*, was established, and merchants in various lines of business opened stores here and made a bid for the trade of the surrounding country, which had, before that time, gone to Astoria and Portland. One important factor in the advancement of Tillamook, at that time, was in the extensive purchase of timber lands made by Eastern syndicates, principally formed in Michigan and Wisconsin. These timber lands were bought principally from actual locators, many of whom flocked here from other sections of the country. These locators, after proving up and selling their claims, which readily brought from $1,200 to $2,000 each, became residents of the town or they settled on farms in the surrounding prairies. Tillamook today is a thriving city of 800 inhabitants, with handsome public buildings, several important manufacturing industries, well equipped and prosperous business houses, a solid bank, fine private residences, well laid-out streets, and it contains a healthy, contented and well-to-do population.

PHOTO. BY REYNOLDS.

HARBOR SCENE, TILLAMOOK.

Tillamook is lighted by electricity. All the hotels and stores, and nearly all the residences, use the incandescent lights furnished by the excellent home company, while the main streets are lighted by arc lamps. Excellent water for domestic use is drawn from wells all over the city. Among the residents here, however, there is a growing demand for a good system of city water works, and they expect, in the near

future, to bring water, by the gravity system, from a pure mountain spring located on an elevation a few miles distant. This would furnish an inexhaustible supply at all seasons.

In June, 1893, Tillamook suffered from an extensive conflagration, which was of incendiary origin. This great fire wiped out two blocks located in the heart of the city, destroying three hotels, in addition to a number of store buildings and residences. It entailed a loss of many thousands of dollars. Although this fire occurred during the memorable panic of last year, the sufferers by the fire gave no thought to despair, but they at once started in to rebuild. All traces of the fire are now practically obliterated. The public buildings of Tillamook now consist of a fine courthouse and a handsome and well equipped school building. The courthouse is conveniently arranged to accommodate the courtroom and various county offices. The public school building meets all present demands made on it for room by the 250 pupils which are enrolled here. The school is presided over by four competent teachers. Four religious denominations—the Methodist, Methodist South, Catholic and Christians—conduct weekly services in their own edifices, and the moral tone of the city shows the effect of their teaching. The main street is lined on both sides with hotels and business houses, and it presents a bus[illegible] appearance. To the fine structures of the town will soon be added a creditable stone building, two stories in height. This is now under construction by the owners, Messrs. C. [illegible]. Thayer, bankers. The stone used in this building is a native sandstone quarried a short distance from Tillamook. A plain, but handsome, style of architecture has been adopted for the building. The ground floor will be devoted to the use of the bank, while the upper story will be divided into offices for professional men.

PHOTO. BY REYNOLDS.

COURT HOUSE [illegible].

The C. & E. Thayer Banking Company was organized by Claude Thayer and his wife, in 1888, merely as an accommodation to business men here, thus enabling them to obtain exchange. A bank, however, was needed at Tillamook, and the new institution was compelled to fill the breach. Its business has grown from $3,000 a month at the outset to $125,000 a month today, and it now numbers among its depositors individuals and firms in all parts of Tillamook county. The bank went through the panic of 1893 without a run and with the loss of a single depositor only.

PHOTO. BY REYNOLDS.

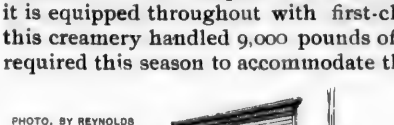
PUBLIC SCHOOL, TILLAMOOK.

The Tillamook Lumbering Company, incorporated in 1892, with a capital stock of $20,000, is the leading industrial concern of Tillamook. The officers are Leonard Heiner, president; William H. Eberman, vice-president, and John Barker, secretary and manager. The company's mill has a capacity of 15,000 feet a day. It runs steadily, turning out all varieties of dressed lumber, flooring, rustic, mouldings, etc. This company owns and operates the electric light plant of the city. Great credit is

due them for their enterprise in furnishing the excellent electric lighting system in use here.

Two creameries are in successful operation at Tillamook. One of these is conducted by Messrs. Ogden & Townsend, produce men of Portland. The other is operated by the Tillamook Dairy Association. The latter is a joint stock company, incorporated under the laws of Oregon. It is owned and controlled by farmers living near Tillamook. The company uses the largest sized Delaval steam turbine separator and it is equipped throughout with first-class machinery. During the summer of 1893 this creamery handled 9,000 pounds of milk per day, and another separator will be required this season to accommodate the growing demands of its patrons.

PHOTO. BY REYNOLDS



STORE, COHN & CO., TILLAMOOK.

Among the leading general merchandise stores of Tillamook are those of Messrs. Cohn & Co. and G. W. Fearnside. Mr. George Cohn is the senior member of the firm of Cohn & Co., and he is recognized as one of the most public-spirited citizens of Tillamook. He has never failed to do his full share in aiding all enterprises looking to the advancement of the city. The firm was burned out in the fire of 1893, but immediately after the fire they rented new quarters on Main street, which they intend to occupy until their new store is completed on the old site adjoining the city wharf. Cohn & Co. carry a full line of merchandise in all departments. Mr. G. W. Fearnside is located on the corner of Front street and First avenue E. His large double store is fully stocked with dry goods, boots and shoes and clothing. Mr. Fearnside has given satisfaction to his Tillamook patrons for over 30 years past in his dealings with the trade of this important section of the state.

PHOTO. BY REYNOLDS.

STORE, G. W FEARNSIDE, TILLAMOOK.

The representative hardware business of Tillamook county is carried on by Messrs. Tuttle & Robeson. This firm is located on the main street. They carry a very full stock of stoves, tinware, hardware, cutlery, etc. The tin and repair shop run in connection with the business turns out the best of work in this line. The very complete drug store of A. Williams carries a full assortment of especially selected drugs, druggists' sundries, fancy and toilet articles. Mr. Williams makes a specialty of putting up prescriptions. The Tillamook bakery is conducted by Wm. Knoell. The well conducted meat market of Tillamook is presided over by L. H. Brown. He sells only the primest meats, fattened on the rich succulent grasses of Tillamook county. The popular resort, the Grand Central saloon and billiard hall, is run by C. B. Hadley, one of the most popular men of the city. The Jones brothers, proprietors of the Tillamook livery stable, furnish teams for tourists and commercial men and board horses by the day or week. They conduct one of the best equipped livery stables on the coast. Carl P. Knudson presides over the forge of a fully fitted up blacksmith shop at Tillamook, and he is prepared to do anything in his line from shoeing a horse to manufacturing a wagon.

PHOTO. BY HEINS.

METHODIST CHURCH, TILLAMOOK.

Among the prominent professional men of Tillamook is E. E. Selph. This gentleman, although a comparatively new arrival in the city, has a large and growing practice before the state and the United States courts. Judge W. H. Cooper successfully combines law practice and farming. A. W. Severance is one of the young lawyers of Tillamook, but he is already recognized as a man of ability. Dr. W. A. Wise, the dentist, of Russell street, Albina, spends his summers at Tillamook, dividing his time here between the practice of his profession and fishing.

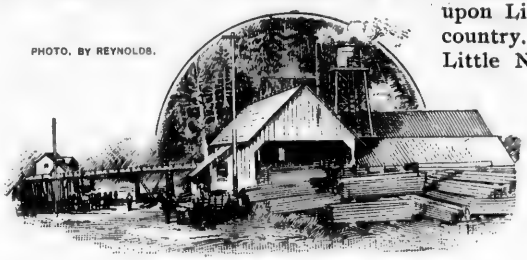
There are three new hotels at Tillamook, all of which have been built since the fire. The Alderman occupies a handsome three-story building on the main business corner of the city. Under the charge of the popular proprietor, A. L. Alderman, and his accomplished wife, the Alderman has earned a reputation for its excellent table, finely furnished apartments, and for the attention shown to the comfort and enjoyment of its guests. The Larsen House is the largest hotel at Tillamook. It was built and furnished in 1893, by M. H. Larsen, a pioneer hotel proprietor of Tillamook. Mr. Larsen thoroughly understands the hotel business and he never fails to satisfy his patrons. The Allen House is located on the main street of Tillamook, and is presided over by Mr. J. P. Allen, a very popular man, both with his fellow townsmen and with the traveling public. Mrs. Allen presides over the culinary department of the house, and the cooking is all done under her personal supervision.

Tillamook has made great advancement during the past year and the promise for its future growth is encouraging. This is one of the most promising dairy sections of the coast, and the making of butter and cheese, together with the numerous other resources of the tributary country, makes the outlook of the city a particularly bright one.

Tillamook County, Oregon.—Tillamook ranks among the leading counties of Oregon in diversity and extent of its natural resources. It is bounded on the west by the Pacific ocean, on the north by Clatsop county, on the east by Washington and on the south by the newly created county of Lincoln.

While certain sections of Tillamook county were settled as early as 1851, it is today but on the eve of a rapid development. The land of the county is diversified in character. The portion of the county on the western slope of the Coast Range of mountains is partly hilly and partly rolling, while that part lying immediately along the coast, and the land for an average distance of eight miles inland, consists of a series of prairies and valleys of great fertility. No less than four bays of considerable extent break the coast line of Tillamook county. These are Tillamook, Nehalem, Netarts and Nestucca. All of these inlets offer harborage for ships of light tonnage. The largest, Tillamook Bay, is capable of being made a harbor of the first class at light expense for improvements to the entrance. Numerous rivers, having their sources in the Coast Range, flow through the county from east to west. These rivers are valuable at the present time for floating logs from the forest districts to tide-water, as well as affording means of communication between the farms of the valley lands and the coast. The principal rivers of the county are the Wilson, Trask, Tillamook, Nehalem, Miami and the Big and Little Nestucca. In addition, there are a number of streams in the county of lesser importance.

The Tillamook River basin contains the most extensive belt of agricultural land in the county. It is today the most thickly settled district along this part of the coast. This basin is divided into the Hoquarton, South, Long and Burnt prairies and Pleasant valley. Tillamook City, the county seat, is located on the border of Hoquarton prairie, between Hoquarton slough and the Trask river. This is the market place for the principal part of the crops of Tillamook county. The entire basin here is cut up into small holdings. The farms here are well improved. The Nehalem country, north of Tillamook River basin and just south of Clatsop county, is another region of great undeveloped resources. These resources consist of magnificent timber, easily reached from salt water, and patches of rich agricultural land. There have been discovered in this district rich croppings of an excellent quality of coal, the development of which only awaits the construction of a railroad through this part of the state. With railroad connection, Portland and the entire Willamette valley would draw upon the Nehalem district for their coal instead of on Puget Sound as they now do. To the south of the Tillamook River basin, and bordering upon Lincoln county, lies the Nestucca country. This is formed by the Big and Little Nestucca rivers. These streams and their tributaries have fine valleys which, taken together, afford considerable area for dairying, stock raising, general farming, fruit culture and bee-keeping. This latter is a growing industry of Southern Tillamook. It pays large returns on the investment of a small amount of capital, and but little labor is required in the production of the honey. Honey of Tillamook county now stands high in the Portland market.



TILLAMOOK LUMBERING CO.'S MILLS, TILLAMOOK.

Viewed from the standpoint of future demands, the lumbering and logging industry of Tillamook county must be given the first place. The timber of this region consists of fir, spruce, hemlock and cedar. The standing timber here is estimated at 20,000,000,000 feet which, at the stumpage price of 50 cents per 1,000, is worth $10,000,000. When to this is added the cost of cutting, running, booming and manufacturing, it makes up a vast sum of money which will, some day, be distributed in Tillamook county, in the lumbering industry.

Next in importance to the timber industry of Tillamook county is that of dairying. Those who are today following this calling, or are looking for new locations, can find no better location than is offered in Tillamook county. There is an abundance of food here for cattle, the lands are perfectly watered and the climate is perfect. The best of grasses, including red and white clover, are indigenous to the lands of Tillamook, and they grow here profusely without cultivation. Just as soon as the land is cleared here, these nourishing varieties of grasses, especially white clover, spring spontaneously from the ground. One acre of this grass will support a cow, and it is not uncommon, in certain localities, for two cows to keep fat from a single acre of grass. The grasses here are the best butter producers known, and in Tillamook county they grow throughout the winter. No abnormally cold weather is ever experienced here. The heavy rains common to all parts of Western Oregon are

supplemented here during the summer months by occasional showers and heavy dews. This excessive moisture militates against Tillamook as a wheat-producing region, but it possesses compensating advantages in its effect on the dairying interests. For winter feeding for stock, in addition to the natural grasses, both barley and oats grow well here. Oats are extremely productive on these lands, the yield of oats per acre during favored seasons running as high as 95 bushels. The alluvial deposits found along the bottom lands of the numerous rivers and creeks produce abundant crops of turnips, carrots and beets, all good butter makers. A matter of great interest to the dairymen is the abundance of cool running water found here. There is scarcely a quarter section of land in the prairie belt of Tillamook county that does not have its cool mountain stream, fed by perennial springs. Tillamook dairymen who make their own butter readily dispose of it for from 20 to 25 cents a pound, 22 cents a pound being the average price throughout the year. Those who do not make butter sell their cream without difficulty to the dairies of Tillamook City for 20 cents a pound. A good milch cow here pays for herself annually in the milk she yields, in addition to adding her calf to the herd. In addition to dairying, stock raising for beef is a profitable industry here, and the Tillamook cattle are considered the best on the market.

The salmon fisheries of Tillamook county form another important industry. The chinook enters the bays of Tillamook county in July and August, and these are said to be equal in quality to the royal fish of the Columbia river. Following the chinooks in September and October are the silverside salmon. These are of a delicate flavor and, as they are very numerous, they form the staple supply for the season's canning. These fish are packed by the Columbia river canneries after the river run of fish is over. These fish are caught for the canneries in seines and nets. They also afford rare sport in spoon fishing, with a 300-foot line trolling behind a boat. They are gamy, and the landing of a 12 or 18 pound salmon here with a line tests the skill of the most experienced angler. There are four canneries in operation in Tillamook county. One of these is located on Nehalem, one on Nestucca and two on Tillamook Bay. The average output of these canneries varies in value from $30,000 to $100,000 a year.

PHOTO BY HEINS.

DAIRY RANCH NEAR TILLAMOOK.

A growing industry in Tillamook county is cranberry culture. The best land for this purpose is found at Sand Lake, about 18 miles distant from Tillamook City, and just south of Cape Lookout. Here there are 400 acres of marsh land, owned principally by W. C. King and C. H. Colton. These gentlemen commenced work on this marsh in the spring of 1893, too late to enable them to plant more than two acres of cranberries that season. This was sufficient, however, to afford a fair test of the producing powers of this land, and the result was more than satisfactory. The Messrs. King & Colton have procured the best varieties of Cape Cod cranberries, and they propose to plant a large tract next spring. In a few years they expect to have their entire holdings here planted to cranberries. A fine stream of water runs through the marsh, and a fine beach of the best sand is near at hand for preparing the ground. The shipping point for the berries will be the bay at Cape Lookout, which affords a sufficient harbor for the purpose. While the principal industry of the country surrounding this bay will doubtless be the culture of cranberries, yet the cutting of tim-

ber here on a large scale can be made profitable. The waters of the bay are alive with fish, and all varieties of clams are found here.

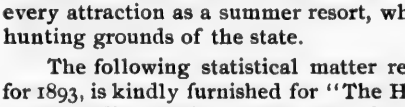
The principal towns of Tillamook county are Tillamook City, Bay City, Nehalem and Garibaldi. Tillamook City is fully described elsewhere in "The Handbook." Bay City is a promising little town of about 400 population. It is located on Tillamook Bay, and promises to develop into a lumbering point of considerable importance. The place has a good hotel, and considerable business is transacted here. Fine summer ocean beaches, which will make the summer resorts of Tillamook county in the near future, are found at Netart's Bay and at Nehalem. These places are already visited annually by hundreds of campers.

The county affairs of Tillamook are ably administered at Tillamook. There is no actual poverty here. The resources of the county are capable of supporting a large population, and to the tourist the rivers and streams of the county present attractions not offered by many water-courses on the coast. The coast points afford every attraction as a summer resort, while the Coast Range affords some of the best hunting grounds of the state.

The following statistical matter relating to the assessment of Tillamook county for 1893, is kindly furnished for "The Handbook" by *The Tillamook Headlight*, one of the leading weekly newspapers of the coast, and published at Tillamook:

"As compared with last year's summary, the assessment shows an increase of 17,929 acres of land, valued at $151,727 more; improvements are valued at $23,320 more; merchandise and implements at $26,324 less; money, notes, accounts, shares of stock, etc., are assessed $109,219 less; household furniture, carriages, etc., are valued at $20,315 more; cattle have increased 778, and in value, $3,635; sheep show an increase of 276, valued at $585 more. The increase in the gross valuation is only $110,176 more than last year, but the exemptions are $221,417 less, leaving a total increase of value in taxable property of $331,683. Summary of assessments of Tillamook county for 1893: acres of land, 224,190, value, $969,375, average value, $4.32; personal property, $40,620; town lots, 6,311, value, $138,025, average value, $21.87, with improvements, $28; improvements, $43,225; merchandise and implements, $55,600; money, $9,990; notes and accounts, $82,315; shares of stock, $1,200: household furniture, carriages, watches, etc, $34,745; horses and mules, 1,088, value, $34,410, average value, $31.12; cattle, 9,702, value, $80,885, average value, $12.06; sheep and goats, 2,045, value, $4,075, average value, $1.99; swine, 834, value, $1,595, average value, $1.91; gross value of all property, $1,496,030; exemptions, $137,730; total taxable property, $1,358,300."

PHOTO BY HEINS, TILLAMOOK.



CLARK'S LUMBER CAMP, NEHALEM.

North Yamhill, Oregon.—North Yamhill occupies a sightly location on a high eminence 1½ miles distant from the depot of the West Side division of the Southern Pacific railroad. Although the present population of this prosperous town does not exceed 400, it is vested with a full municipal form of government, and the high moral tone of the community bespeaks well of the governing powers of this point.

A union church building, at North Yamhill, temporarily accommodates the four organizations of the Congregational, Baptist, Methodist and Christian denominations. At least one of these denominations confidently expects to have church quarters of its own sometime during the present year. In addition to the auditorium of the church building, North Yamhill also contains a public hall with a seating capacity of about 300.

A feature of all the prosperous towns of the Willamette valley is the attention that is paid to the perfection of the public school system. North Yamhill is not behind any of the other valley towns in this respect. The public school of the city is in charge of two teachers, one principal and one assistant, and the average number of scholars in attendance is about 100. Located at North Yamhill is an important plant devoted to the manufacture of tile, and the place also supports a good creamery, whose product commands a large sale among patrons of first-class dairy products. The tile factory at this point is devoted exclusively to the manufacture of drain pipe. The clay for making this product is found in inexhaustible quantities within a convenient distance of the factory, and this clay is spoken of by practical men in the business as really of a superior quality for the purpose of the manufacture of the product turned out by this plant.

The creamery is a farmers' co-operative institution. It is conducted on a strong financial basis, and its average returns to its owners are from $600 to $1,000 a month. Farmers of this section who are not directly interested in the plant of the creamery bring their milk here, have it weighed, manufactured into butter, and this product is then shipped to Portland, where it finds ready buyers at good prices throughout the year. The creamery company, after deducting four cents a pound for the actual cost of manufacturing, shipping and wear and tear of machinery, turns over the balance of the money received from the sale of the butter to the farmers who are its patrons. The plan of conducting this plant is giving the most signal satisfaction to both the owners of the property and to the town in which it is located, and the farmers of other parts of the coast can learn a profitable lesson on conducting a creamery on a large scale by copying after the efficient plan adopted for conducting the creamery at North Yamhill.

A thrifty and prosperous class of farmers occupy the country immediately tributary to North Yamhill. The farming belt contained within the district marked by a radius of five miles from the town, last year produced 225,000 bushels of wheat and oats. In addition to the attention which is paid to the raising of the cereal crops here, this county also grows large quantities of hops of an excellent quality annually. About 800 acres are now devoted to hop culture in the country tributary to North Yamhill at the present time. From 400 acres of land here last year 500 bales of hops were grown, which brought the farmers about $20,000, a profitable return for the attention that the raising of this product required.

The soil of this section is especially adapted to the growing of fruits, and the shipments of fruit from this point annually are regularly increasing. Of late years special attention has been paid to prune culture, with excellent results.

A valuable water power is available within one mile of North Yamhill. This power can be made of great value, both for running manufacturing plants and also for the development of works of a public nature and it will also be of advantage to the residents of the town.

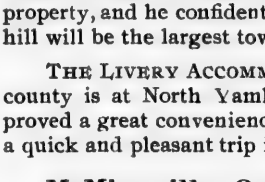
The Reporter, a weekly paper, is published at North Yamhill. The town has one hotel. An omnibus meets all trains at the station of the Southern Pacific. Two trains, carrying mail and passengers, pass this point daily, both north and south. In addition to the line of transportation of the railroad, North Yamhill supports a stage which makes daily trips to Tillamook, about 40 miles distant.

The resources of the country tributary to this town are varied and include timber and all of the products of the soil. The country is an ideal one for a home, and it is now one of the most prosperous sections of the great Willamette valley.

One large general merchandise store, that of F. Hauswirth, and two or three smaller ones, do the business in this line at North Yamhill. Mr. Hauswirth can be truthfully said to be one of the pioneers of North Yamhill, having now resided in the town and in Yamhill county for the past 35 years. Like many of Oregon's pioneers, he has, by close attention to business, and economy, accumulated considerable property, and he confidently looks forward to the time when, as he says, North Yamhill will be the largest town in the county.

THE LIVERY ACCOMMODATIONS.—The second largest livery stable in Yamhill county is at North Yamhill and is owned by P. H. Mesner. This stable has often proved a great convenience to tourists or prospective investors who desired to make a quick and pleasant trip into the rich country tributary to the town.

McMinnville, Oregon.—McMinnville, the county seat of Yamhill county, has a decided metropolitan appearance. The main business district of the city is confined to one street, which is well macadamized, and the sidewalks of this main thoroughfare are constructed in part of well-laid planks and in part of artificial stone. Substantial brick buildings line both sides of the street for a distance of three blocks, and in the heart of the business center but few frame buildings are still standing. The principal stores of McMinnville are well stocked with the goods usually demanded by a thriving young place of the dimensions of the city and by a prosperous farming community which is the principal mainstay of McMinnville's prosperity.



YAMHILL COUNTY COURT HOUSE, MCMINNVILLE

McMinnville was incorporated as a town in 1876. Its population today is not far from 2,500. A steady growth has marked its history for the last decade, during which period the population of the place has more than quadrupled. It is the proud boast of the people of McMinnville that the growth of their town has been in the lines of steady advancement and solid prosperity and the place has never experienced even the shadow of a boom. The prosperity of McMinnville is due to the enterprise of its citizens, which has been materially aided by rapid and solid development of one of the richest farming sections of the Northwest which is directly tributary.

Like other growing cities of the Northwest, the educational facilities of McMinnville have never been neglected, and the excellent schools located at this point have contributed materially to the city's growth. The excellent public school system of McMinnville together with the well conducted Baptist college located at this point, which is described at length in connection with the present article, has gained for the place a standing as an educational center of no mean importance. Within the last two years the district has voted to add another building to be used for school pur-

poses. In addition to the large six-room building, another structure of equal dimensions, but better designed for school work, has been completed at a cost of $14,000. The value of the property of the city devoted to public school purposes is now $30,000, an indication of the intelligence of a community which can fully appreciate the benefits of a proper schooling for the rising generation and which has the enterprise to advance all the needed money for this purpose. The public school system of McMinnville is well graded, the grades ranging from one to nine. Nine teachers are employed in the public schools, and courses of study embrace the primary, grammar and high school, just as they do in the best conducted schools of any large city. The total number of pupils enrolled in the public schools at McMinnville for the past year was 430.

PUBLIC SCHOOL, MCMINNVILLE.

Two flouring mills with a combined daily capacity of 225 barrels, a creamery and an arc and incandescent electric light plant are McMinnville's most prominent industries. The city also has a most efficient water-works system. The water is delivered all through the city on what is known as the "direct pressure" plan. This water for city use is pumped out of the Yamhill river within a stone's throw of the city and it is of the clearest and purest quality for domestic use. Both the electric and water plants are owned by the city. A sufficient pressure is maintained in the city mains at all times to insure ample protection against fire. Water plugs are located at convenient distances all over the city and these with the efficient volunteer fire department which is maintained here are absolute safeguards against serious conflagrations.

McMinnville is built on the strongest of foundations, a rich and well settled farming district. The soil of Yamhill county has long been noted for its fertility. Wheat, oats, fruit and hops are cultivated more extensively here than are other crops. McMinnville is the trading center for the principal part of Yamhill county whose resources are touched on fully in another article.

In addition to the trade of the farming community which McMinnville holds, the lumbering interest of the tributary district is a great source of revenue to the city. The Coast range of mountains west of the place is dotted with sawmills the output of which mills is nearly all brought to McMinnville. McMinnville furnishes all the supplies used at these mills and at the lumber camps. The timber belts of this section contain an inexhaustible supply of as fine a quality of merchantable timber as is found in any part of the coast and the sawing of this timber will always prove a source of great revenue to Yamhill county and to the city which is the principal trading center of this rich section of country.

HIGH SCHOOL, MCMINNVILLE. ERECTED IN 1892.

Near the foothills of the Cascade Range west of McMinnville, sheep raising is carried on to a considerable extent, although not sufficient sheep are raised in this country at the present writing to meet the demands at McMinnville for mutton and wool.

Sheep raising is a profitable industry, and with proper attention can be made a source of considerable revenue to the ranchers of Yamhill county.

PHOTO. BY J. HOGG.

CAMPBELL & JONES BLOCK, MCMINNVILLE.

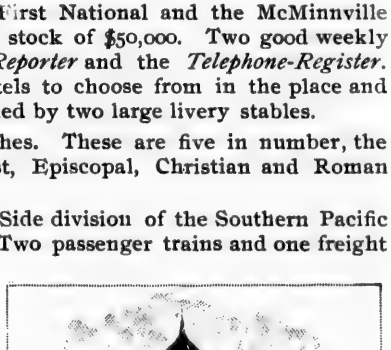
With other parts of the Willamette valley the dairying possibilities of Yamhill county have received the special attention of the farmers of this section during the past few years. With plenty of grass throughout the year, with an equable climate and with an abundance of the clearest mountain water, this is an ideal dairying country, and it is highly probable that there will be great development in this line here during the next few years.

Yamhill county boasts of a fine brick court house located at McMinnville. This public building is cemented on the outside, thus giving it the appearance of a structure constructed entirely of stone. It was built in 1888 at a cost of $62,000. It covers an area of 9,000 square feet and is 121 feet high. It occupies a sightly location commanding a perfect view of the entire city and surrounding country, and it is perfectly adapted in every way for handling the public business of the county.

McMinnville has two strong banks, the First National and the McMinnville National. Each of these banks has a capital stock of $50,000. Two good weekly papers flourish here, the *Yamhill County Reporter* and the *Telephone-Register*. Tourists have the advantage of two good hotels to choose from in the place and also have the benefit of the competition afforded by two large livery stables.

McMinnville is well supplied with churches. These are five in number, the Cumberland Presbyterian, Baptist, Methodist, Episcopal, Christian and Roman Catholic.

The city is on the direct line of the West Side division of the Southern Pacific railroad, and is 50 miles south of Portland. Two passenger trains and one freight pass each way over this line through McMinnville daily. The city is located in the richest of farming districts; it contains a large number of prosperous and well-to-do people and there is no reason why McMinnville should not continue to make the same steady growth in the future as has marked the progress of this point during the past few years.



MCMINNVILLE COLLEGE, MCMINNVILLE.

MCMINNVILLE COLLEGE.—The location of a college at McMinnville, the county seat of Yamhill county, a city situated in the very heart of one of the richest agricultural sections of the Willamette valley, seems to have been well considered when the McMinnville College was chartered by

the legislature in 1858-9. The growth of the institution has not been marked by rapid and uncertain strides, but by painstaking care on the part of the trustees and faculty it has gradually taken its place in the front rank of Oregon's higher institutions of learning.

McMinnville College is under the control of the Baptist denomination of Oregon. It aims to provide young men and women with a liberal education at a low cost. This is made easy in the first place owing to the able corps of instructors which it maintains, and second, owing to the extreme cheapness of living in a rich farming community. The college has a collegiate, business, preparatory and musical department, with five courses of study prescribed, three of which lead to degrees and two to certificates of graduation.

The college is superbly located on a broad campus of 30 acres just at the outskirts of McMinnville. The building is a large four-story brick which was erected in 1882 at a cost of $30,000. Students are in attendance at this school who have come from the various states of the Pacific coast and also from Montana and Idaho. A feature that has ever been prominent in the history of McMinnville College is its willingness to aid students of limited means to secure an education. Although the institution is not heavily endowed, its resources are sufficient to aid those who are deserving and are anxious to obtain an education.

Since the accession of Rev. T. G. Brownson to the presidency in 1887, the permanent endowment funds have been largely increased, and the regular income of the college considerably more than doubled.

JUDGE WILLIAM GALLOWAY, MCMINNVILLE.

JUDGE WILLIAM GALLOWAY, whose portrait appears on this page, is president of the board of school directors and present county judge. It is commonly remarked of him that he would not accept an office on the school board except on the promise that the district would vote to increase the much needed school facilities by erecting the handsome building described above. Judge Galloway's efforts since that time in behalf of the McMinnville schools have marked him as one of the most ardent devotees of a thorough education.

Yamhill County.—Yamhill county is one of the oldest settled districts of the Northwest and it is today one of the richest counties of the Willamette valley. It is bounded by Washington county on the north, by Polk county on the south, it borders on Marion and Clackamas counties on the east, and it extends as far west as the eastern boundary of Tillamook county. It has an area of 720 square miles and contains a population today of about 12,000.

Careful estimates place the amount of land cleared and under cultivation in this county at about one-half its total area. Wheat is the great staple product of the county. The yield of wheat on this soil varies all the way from 15 to 45 bushels per acre. The soil is very fertile, and is especially adapted for raising all kinds of grain, grasses and vegetables. It is a rich black loam, varying in depth from four to twelve

feet, and being well watered, warm, and capable of withstanding any spell of dry, warm weather, it furnishes the finest land for fruit trees. It is here as it is in the other favorable locations in the Willamette valley, that all kinds of small fruits, including raspberries, strawberries, currants, blackberries, etc., and the larger varieties, including apples, pears (and the Bartletts of Yamhill county beat the world), plums, prunes and quinces grow to perfection.

The topography of Yamhill county is perhaps more of a rolling character of the best lands than is noted in Washington county. A heavier growth of timber is also found on the higher elevations of the county than is found in the county to the north. The entire county is perfectly watered, numerous small streams of the clearest water crossing it in all directions. These smaller streams abound in the gamiest of brook trout, and afford fine sport as fishing grounds. The principal water-course of the county is the Yamhill river, into which most of the smaller streams flow, and which during most of the year carries a considerable volume of water. During high stages of water the Yamhill river is navigable to McMinnville, thus affording a water route from the latter place to Portland and the other principal points of the Willamette valley. The numerous water courses of the county afford at convenient points available water power, which will doubtless be largely utilized for turning the wheels of a large number of small factories.

Lying along the foothills of the county are numerous dairy and stock farms that can be purchased for prices ranging from $5 to $15 per acre. Further back in the hills there is still a little government land, but this land is being rapidly taken up. Improved farming lands near the larger towns of the county command prices ranging from $40 to $100 per acre. These lands can usually be purchased on easy terms and the returns represent a fair interest on the money for which they can be bought.

The valuation placed upon the taxable property of Yamhill county for 1892, as shown by the assessment roll, was $4,046,309. The county is rich and progressive, and it is settled by an intelligent class of people. The educational facilities afforded the youth of this part of the state are unsurpassed in any farming community. There are now 70 districts in the county and 68 school houses. The county contains 2,500 persons of school age, and 121 teachers are employed in its schools. Yamhill county has forged rapidly to the front during the past decade and has made both material growth and solid advancement, and there is no present indication of the retrogression of this prosperity in the future.

Independence, Oregon.—If a location that offers every facility for building up a prosperous center of population, together with a wide-awake and intelligent set of business men, determines the degree of success which a town may attain, then Independence can justly lay claim to both enterprise and the full measure of prosperity. Its location can be appreciated from the statement that it is one of the largest towns on the west side of the Willamette river, through which the trains over the west side division of the Southern Pacific, running between Portland and Corvallis, pass. It is reached by steamers on the Willamette river, navigable from Portland up to this point, and it is connected with the narrow-gauge system of the Southern Pacific, tapping the best part of the Willamette valley, by a steam motor line which operates hourly trains between Independence and Monmouth, only 2½ miles distant. It is 75 miles to Portland from Independence by rail. The town has the benefit of daily passenger and freight trains, which connect with all points north and south, and com-

bined passenger and freight steamers make two round trips a week between Corvallis and Portland, touching at Independence both ways.

Independence is practically entirely surrounded by a rich and highly productive farming district. Vast quantities of hops, wheat, oats, vegetables and fruit raised in this section are hauled to Independence for shipment by rail and by water. The town handles nearly all the immense trade of the tributary section of farming country, and it is one of the most important shipping points on either the east or the west side of the Willamette river.

Independence is incorporated with a population of about 1,700. Although the first store on the present site of the town was established as early as 1850, the great growth of Independence has been made during the past few years. With this rapid growth in population has also come the same rapid increase in the manufacturing industries of the place. A well equipped sawmill is conducted on the river bank at this point, and this mill is kept running constantly. A large flouring mill with a daily capacity of 100 barrels is also located here, as well as two sash and door factories, an axe handle factory, one wire fence works, marble works, a foundry and a well conducted steam laundry. Having the benefit of the competitive rates of freight afforded by the river and rail route to Portland from this point, and being located in the midst of a section in which the raw material for all kinds of manufacturing is easily produced, Independence offers exceptional facilities for the establishment of manufacturing plants, and it will always remain as it is today, one of the principal manufacturing points of the valley.

PUBLIC SCHOOL, INDEPENDENCE.

The leading business houses of Independence are all well stocked and they do a very prosperous business. The largest dry goods store in Polk county is located at Independence. It was established 28 years ago by Mr. Isaac Vanduyn. Mr. J. M. Vanduyn is now the sole proprietor of this mammoth establishment, which carries constantly a stock of goods whose value is about $20,000. Mr. Vanduyn, the present proprietor, is a man of great push and enterprise, and he stands deservedly high in the community whose interests he has done so much to advance. Independence contains two strong banking institutions. The First National Bank of Independence has a capital stock of $50,000, with a surplus of $14,000. Its officers are J. S. Cooper, president; L. W. Robertson, vice-president, and W. H. Hawley, cashier. The Independence National Bank is quartered in a handsome brick structure, an illustration of which appears in connection with the present article. This strong bank was established about five years ago. Its officers are H. Hirschberg, president; Abram Nelson, vice-president, and W. P. Connaway, cashier. Both of these institutions have the best standing in financial circles of the coast.

The public schools, as shown by the illustration above, are conducted in an elegant and commodious building containing eight rooms. The school building and site represent an outlay of $20,000. The course embraces eight grades, including common and high school departments, with a competent instructor in

charge of each grade. The average daily attendance at these schools is about 400. Independence is well provided with churches, which speaks well for the moral tone of its inhabitants. The Calvary Presbyterian, Baptist, Methodist, Episcopal, Evangelical and Christian denominations are strong in membership and influence, and they all worship in church buildings of their own. The town also boasts of a handsome brick opera house, which is used for all gatherings of a public nature. It has a seating capacity of 500, and is well lighted and ventilated.

Independence has a fine arc and incandescent electric light plant, as well as an efficient water-works plant. Both of these plants are owned by private corporations. The town is protected against danger by fire by a well equipped and thoroughly organized volunteer fire department. Independence supports one good local newspaper, *The West Side*. Three good hotels cater to the traveling public, while two livery stables provide plenty of horses and vehicles for the commercial traveler and the tourist. A daily stage line runs from Independence to Salem, a distance of 15 miles. This place has made most substantial advancement during the past few years, and there is no reason why, with every advantage in location, and with the efforts of a wide-awake people, Independence should not make the same steady advancement in the future.

INDEPENDENCE NATIONAL BANK, INDEPENDENCE.

Newberg, Oregon.—Newberg, in Yamhill county, is situated on the narrow-gauge system of the Southern Pacific railroad, 26 miles south of Portland. The town was incorporated in 1888, the population at the time of incorporation having been about 500. Since that time the place has more than doubled in population, and it is now one of the flourishing points on the west side of the Willamette valley reached by the narrow-gauge system.

Newberg is located in the heart of the Chehalem valley, which, during the past few years, has been attracting considerable attention as a rich fruit-growing section. The town was first settled by a colony of Quakers, who yet hold the balance of power in the matter of population and in control of the municipal government at this point. The old town of Newberg still stands near the bank of the Willamette river, where it was first located, but the new town is located midway between the river and the railroad, the distance between each being about one mile. The old and new towns, however, are under a single municipal government, and the interests of both centers of population are handled harmoniously.

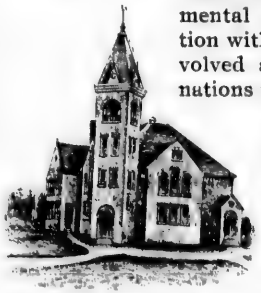
The manufacturing interests of Newberg consist of a small roller-flouring mill and a sawmill, both of which are located on the river bank. Both of these plants are operated by water power. A drain tile works, which manufactures annually a large quantity of tile from blue clay, which is found in the vicinity of the town, is also located here. The Newberg Pressed Brick & Terra Cotta Company was organized last year, with a capital stock of $50,000. This plant has now been in operation for almost a year, and it is now turning out dry-pressed brick, made from dry clay, at the rate of 20,000 per day. The principal market for the output of this plant is in Portland.

The various mercantile pursuits of Newberg are handled principally by a wide-awake class of business men. The town claims two banks, which do a large and safe business. Situated on the main street of the town are four brick blocks, and it is the intention of the owners of other business property here to erect additional fine buildings during the present year.

The people of Newberg take a pardonable spirit of pride in the fine schools maintained here. The Pacific College, founded and fostered by the Friends' church, is located at this point, and it offers a full collegiate course of instruction, embracing the classical, scientific, normal, music and art departments. The average attendance of students at this school during the past year was 80. An efficient corps of instructors preside over each department of the school. The college building shown by the illustration published on this page, affords ample facilities for conducting the thorough collegiate work of the school. The public school of Newberg is conducted in an eight-room building, six rooms of which are now occupied. Six teachers are now employed in the public school here, and the school, in its efficiency, compares very favorably with the best public schools of the state. The average daily attendance of pupils at the public school is about 250.

PACIFIC COLLEGE, NEWBERG.

Newberg is distinctly a moral town. No saloon or resort of vice is found in the town, the location of saloons here being restricted by a town ordinance. Eight churches, most of which own their places of worship, are established here. The denomination of The Friends own a church building of an ornamental nature, as shown by the illustration published in connection with this article. The erection of this church building involved an outlay of about $10,000. The other church denominations represented here are the Presbyterian, Baptist, two Methodist, Christian, Evangelical and Adventists. In addition, a strong Y. M. C. A. organization is maintained in the town, as well as a free reading-room for the benefit of the public. Two newspapers are published at this point, *The Graphic* and *The Chehalem Valley Times.* Tourists visiting Newberg find comfortable accommodations furnished by the two hotels and two livery stables of the town.


FRIENDS' CHURCH, NEWBERG.

In the district tributary to Newberg fruit growing is the principal occupation followed. The Chehalem valley proper includes an area of 3 miles by 10 miles in extent, and the greater part of the land contained in this area is especially adapted to fruit culture. Peaches, pears, prunes, cherries, and all the smaller varieties of fruit, do well here. In addition, the land also produces hops, cereals of all kinds, and vegetables, as well as any land in the Willamette

valley. Prune growing pays well here. With an average of 125 trees to the acre, and an average yield of 50 pounds of fruit to a tree, at 8 cents per pound, which is the price paid for dried prunes in bulk, the annual income from an acre of prune land here is about $500. A most conservative estimate places the profit from a single acre planted in mature prune trees in the Chehalem valley at from $250 to $300.

Newberg is within easy reach of Portland, either by the daily lines of steamers which ply regularly on the river, or by the cars of the railroad passing this point. The country surrounding Newberg is comparatively a newly settled district, and the inducements offered to newcomers to settle in this tributary section at the present time are especially flattering.

THE YAMHILL LAND COMPANY.—The Yamhill Land Company, of Newberg, was organized and incorporated in 1891, with the following officers: J. P. Price, president, and O. C. Wright, secretary. This company is authority for the statement that fruit and farming lands situated within a distance of from one to four miles of the corporate limits of Newberg, can be purchased at from $40 to $100 per acre. Parties desiring to obtain reliable information concerning Yamhill county, are commended to the Yamhill Land Company, of Newberg, Oregon, for prices of land or statistics of this section.

THE BANK OF NEWBERG.—The Bank of Newberg was organized in July, 1889, with a paid-up capital stock of $30,000. The present officers are: Jesse Edwards, president, and B. C. Miles, vice-president and cashier. The Bank of Newberg, since its organization, has done a constantly increasing business, which is probably due to the fact that the public has always had implicit confidence in the officers of the bank. Mr. Edwards enjoys the honor of having first owned and platted the site upon which Newberg now stands. He has also, since that time, been prominently identified with the best business interests of the town. He is now, in addition to being prominently connected with the Bank of Newberg, president of the Newberg Pressed Brick & Terra Cotta Company. Mr. Miles, whose father was the first president of the bank, was, until recently, a member of the mercantile firm of Morris, Miles & Co., and he is well qualified to fill the position of cashier of the Newberg Bank.

BANK OF NEWBERG, NEWBERG.

LaFayette, Oregon.—Two miles east of St. Joseph, on the West Side division of the Southern Pacific railroad, and located in Yamhill county, is the flourishing town of LaFayette. In addition to direct communication afforded LaFayette with Portland and the principal valley towns by the Southern Pacific line, the town is also on the line of the Oregonian [narrow gauge] railway, which runs south from Portland through the best part of the Willamette valley. Two passenger trains run each way daily over both lines past LaFayette, thus affording the latter place the best of transportation facilities.

One of the most distinguishing features of LaFayette, and one in which the citizens take a great deal of pride, is the LaFayette Seminary, located at this point. The college is conducted under the auspices of the Educational Association of the Oregon Conference of the Evangelical Church, and all of its privileges are open to men and women alike. The curriculum prescribed and plan of discipline adopted

for the guidance of students rank with the scope of more noted institutions of learning. The average attendance of this school during the past year was 80 students.

The public school system of LaFayette is also especially worthy of mention here for the high degree of efficiency maintained. The public school is in charge of three experienced teachers, and the average enrollment is 125 scholars.

LaFayette is an incorporated town, with a population of about 450. It is largely supported by a rich tributary farming district, the products of which consist chiefly of cereals, vegetables and fruits. The soil in this district is no less fertile than is the soil of the entire Willamette valley, and the prices asked for farming lands here are reasonable.

A flouring mill with a daily capacity of 75 barrels supplies the citizens of La Fayette with an excellent quality of flour, and this mill also supplies the town of Dayton, a few miles distant.

LaFayette supports one good weekly newspaper, *The Yamhill County Ledger*. It has two hotels, one livery stable and the various lines of mercantile business are well represented here.

Three well supported churches, the Presbyterian, Methodist and Evangelical bespeak the moral tone of the community. The town supports a public hall with a seating capacity of 300. The place is particularly noted for the number of wealthy retired merchants it claims, ample evidence of the possibilities for obtaining wealth here in the past and which may be also accepted as evidence bearing on the capacity of the community for future prosperity.

Dayton, Oregon.—Dayton is incorporated and boasts of a population of about 400. It is located at the head of navigation on the Yamhill river, 33 miles southwest of Portland. The place has connection with Portland by a line operating a steamer which makes a trip every alternate day between the two points. The line of the narrow-gauge division of the Southern Pacific system of railroads in Oregon passes a point within one mile of Dayton, and the citizens of the latter place hope to have the cars of this line running into their town direct before the close of the present year. A stage line carrying both freight and passengers makes two trips a day to LaFayette and St. Joseph, making connection at the latter point with the cars of the Southern Pacific Company's West Side division. The total length of this stage line is five miles.

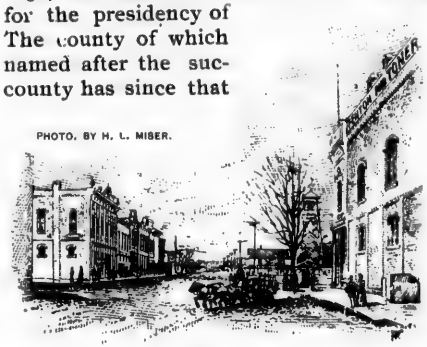
Although at the present writing no manufacturing is done at Dayton, the town offers exceptional opportunities for the establishment of factories here on a small scale. The extent of the rich tributary farming district is shown by the large quantities of hops, fruits and various other products of the soil which are regularly shipped by the water line from Dayton to Portland.

The Dayton public school building recently erected at a cost of $6,000 occupies a sightly location. The average daily attendance at the school is about 100. A principal and one assistant teacher preside over the school here, which is well conducted.

Dayton supports four churches of the Methodist, Baptist, Evangelical and Free Methodist denominations. Each denomination owns its church building. The town hall has a seating capacity of about 300. Two weekly papers are supported here, *The Herald* and *The News*. Traveling men find a good hotel at this point,

and also a livery stable. Dayton at the present time makes no pretensions to great commercial importance, but is a prosperous town containing a happy and contented lot of people, and the possibilities for future steady growth are equal to those of the other favorably located valley points.

Dallas, Oregon.—Dallas is a name that was prominently associated with the history of the early settlement of Oregon. The town of Dallas was established in 1852, and was named after the Hon. George M. Dallas who was at that time running for the presidency of the United States against James K. Polk. The county of which the town of Dallas is now the seat was named after the successful candidate in this fight, and Polk county has since that time been one of the most prosperous counties of the Willamette valley.



MAIN STREET, DALLAS.

A steady and substantial growth has marked the history of Dallas since the first settlement was made at this point, and today it is a bustling little city with a population not far from 1,500. Nature first favored the location of a town at the present site of the city, and the enterprise of the later residents of Dallas did the rest. It is perfectly sheltered by the mountains which rise to the west and south. It is skirted by the La Creole river, a pure mountain stream, which at all seasons carries a good volume of water. Dallas occupies a position in the exact geographical center of Polk county, and it has the support of a rich and rapidly developing farming community which will always remain tributary.

The spirit of enterprise by which the citizens of Dallas have always been actuated is shown in the attention which has been paid to the development of the manufacturing industries at this place during the past two years. In this time a fine three-set woolen mill with machinery of the most improved type has been completed and put in operation here. The location of this mill at Dallas will do much to encourage the wool industry of Polk and the adjoining counties, and it will be the means of holding much of the trade of this section to Dallas, which, without the mill here, might have gone to other towns. The location of one large sawmill and two planing mills at Dallas has made the place the principal seat for the lumbering of a large and rich section. Dallas is also the seat of a perfectly equipped flouring mill, the product of which vies in quality with the best flour produced in the state. The Dallas iron works plant, which is run under the management and proprietorship of Edward Biddle, does a large business in moulding all kinds of castings used in the farm machinery of this part of the state, in addition to other regular foundry work which it handles, and it is a very profitable industry.

The country surrounding Dallas is especially adapted to fruit growing on a large scale. Special attention has been paid to fruit culture in this section during the past year and within a radius of 1½ miles of the town more than 600 acres of land have been planted in prunes, peaches, pears and other fruits. A number of very fine hop farms are situated within plain view of the people of Dallas. The profits realized from hop culture on these lands is shown in the statement that land which can be

PHOTO. BY H. L. MISER.

POLK COUNTY COURT HOUSE, DALLAS.

bought here for $50 an acre commands from $200 to $250 an acre when fully planted in hops. Within a distance of 10 miles of Dallas is a fine timber belt containing immense quantities of the finest merchantable timber. But three miles distant from the town is a quarry of a high-grade building stone. This stone lies imbedded as a solid strata, and before being exposed to the air can be hewn into any shape or size almost as easily as wood is cut. It rapidly hardens, however, after lying open to the air and makes the finest of stone for building material when fully seasoned. This quarry has been but little developed yet, but it will some day be a source of great profit to the owners and a most valuable addition to the many enterprises of Dallas.

Dallas is the seat of the La Creole Academy, one of the oldest institutions of learning in the state. Three years ago the frame building so long occupied by the school was abandoned, and a handsome and commodious brick structure was erected for the academy at a cost of $10,000. Two years ago it was found advisable to combine the excellent public schools of the city and the academy under one management. This has resulted in furnishing more room for school purposes, and in a highly improved course of study. The intermediate and primary grades are taught in the public schools here, while the grammar and academic courses are pursued at the academy. A principal and five assistant teachers preside over both schools. The total enrollment of scholars at the schools here during the past year has been to exceed 400.

Five church organizations are well sustained at Dallas. Within the past three years the Presbyterian, Methodist, Episcopal and Christian denominations, has each erected a neat church building of its own. The Southern Methodists and Baptists are the oldest denominations in Dallas.

All branches of professional, mercantile and mechanical pursuits are well represented at Dallas. The Dallas City Bank, of which Mayor M. M. Ellis is president, and C. G. Coad is cashier, has a capital stock of $75,000. It is incorporated, and being on the strongest of financial footings and conducted in a conservative manner, it enjoys the full confidence of the people of this section, and has a very large patronage. Three good newsapers, *The Transcript*, *Itemizer* and *Observer*, are untiring in their efforts to advance the interests of the section in which they thrive, and they enjoy a large circulation.

PHOTO. BY H. L. MISER.

LA CREOLE ACADEMY, DALLAS.

A feature of great interest to the traveling public which frequents Dallas is the excellent accommodation afforded here by the perfectly conducted hotel. Six years ago a stock company was formed at Dallas for the purpose of erecting a fine building for hotel purposes. It was the aim of the company to meet every demand of the large tourist travel and the commercial salesmen who frequented this place, and at the same time to erect a building which would be an ornament to the city. The Hotel Holman, an illustration of which is published in connection with this article

PHOTO. BY H. L. MISER.

HOTEL HOLMAN, DALLAS.

was the result of this enterprise. The building was erected at a cost of $10,000, and is perfectly adapted for hotel purposes. It contains 32 rooms, all of which are well furnished. It is lighted by electricity and has every modern appointment found in the best of hotels. It is conveniently located, being within two blocks of the railroad depot. The Hotel Holman is now owned by Nathaniel Holman, a well-known citizen of Dallas. An attractive dining-room and an excellent cuisine are features of this well conducted house. The rates of the Hotel Holman vary from $1 to $2 a day, as low rates as are charged for first-class accommodations by any hotel in the world.

Dallas supports two well equipped livery stables and two stage lines. One of these connects with trains of the West Side division of the Southern Pacific at Derry, about five miles distant, and the other line operates stages between Dallas and Salem a distance of 15 miles. The city is located on the main line of the Oregonian [narrow-gauge] division of the Southern Pacific and is 62 miles south of Portland. Trains make one round trip daily between Portland and Dallas. Owing to the many advantages of location Dallas will doubtless continue to make the same steady advancement in growth of population and material wealth in the future that the place has enjoyed during the past few years, and it gives promise of always remaining one of the most prosperous points of the Willamette valley.

Good farming lands in the vicinity of Dallas find ready purchasers at prices ranging from $50 to $100 an acre. Full information of these rich lands can be obtained by addressing either Messrs. Fulton & Bell or William P. Wright, Dallas, Oregon. These gentlemen will be ready at all times to answer all inquiries regarding their city or the rich county of Polk, of which Dallas is the seat of justice, and all information obtained from this source can be regarded as strictly reliable.

Polk County, Oregon.—As early as 1845 the name of Polk county had been given to a part of Oregon, but at that time the county limits of Polk included all that portion of the state lying between the Willamette river and the Pacific ocean, and they extended from the southern boundary of Yamhill on the north to the northern line of California on the south. Since that time the former extensive area of Polk county has furnished territory for the formation of many other counties, and today Polk county is one of the smallest in area in the state. The total area of this county is now less than 800 square miles. The present boundary lines of the county are formed by Yamhill county on the north, the Willamette river on the east, the Coast range of mountains on the west, and Benton county on the south. The county is thickly settled, and it contains some of the best cultivated farms in the state. About one-eighth of the total area of the county still vests in the government and the Southern Pacific Railroad Company.

It is estimated that about two-thirds of Polk county is embraced within the fine lands of the valley and the equally rich rolling stretches which border on the foothills. The remaining one-third of the land contained in the county is rugged, but it is covered with an almost impenetrable growth of the finest timber. The general character of the soil varies little, if at all, from the rich soil of other parts of the

Willamette valley. The soil here is equally as productive as that of the most favored parts of the state. The soil of the valley lands is best described as a dark loam with a strong clay subsoil, the latter possessing the distinctive feature of retaining moisture throughout any period of drouth, which accounts largely for the great productive powers of all of this land. The soil of the bottom lands is composed of rich alluvial deposits, which seem inexhaustible in their powers of production. The foothill lands, while no less arable than are those of the valley proper, are composed of a red, brown and, at times, black loam. They are warmer than are the valley lands, and are especially adapted to the growing of early fruits and vegetables. No county in the state surpasses Polk in the matter of quality aud quantity of its products, consisting principally of hay, hops, cereals, vegetables and fruits.

The natural grasses of the county grow luxuriantly. It has been proved that one acre of this natural grass land will support a sheep, and two acres will furnish forage for an ox the year round. With average cultivation wheat yields, in this county, from 25 to 40 bushels per acre, barley 40 to 60 bushels, and oats 50 to 80 bushels. The cultivation of hops in Polk county, although comparatively an innovation here, is becoming an extensive and a most remunerative industry. The bottom lands of the county are especially adapted to hop culture. Vegetables of all varieties attain unusual size in Polk county, and they are rich in flavor and nutritive qualities. Potatoes, cabbages, beets, turnips, squashes, carrots, parsnips and cucumbers give prodigious yields on these lands. The potato bug, the dreaded pest of the Eastern farmer, has never gained a foothold in Oregon, and a failure of root crops from any cause has never been known in Polk county. Fruits, including apples, pears, prunes, peaches, plums and cherries grow in such abundance in the orchards of Polk county, that it is always necessary, during the ripening season, for the farmer of this part of the state to give careful attention to propping up his trees to prevent the limbs from breaking off under the immense loads of fruit which they carry.

The Coast range of mountains, as well as a large part of Polk county, is covered with a dense forest growth of hard and soft woods. Trees 200 to 250 feet in height and of nine feet diameter are plentiful in this district. All of Polk county is well watered. Several streams flow down the mountain sides into the valley lands of the county with a sufficient head of water to furnish power for running hundreds of factory wheels. Springs are found everywhere, and water can be reached anywhere by digging all the way from 10 to 15 feet.

Polk county is abreast of any part of the state in the matter of provision made for public education. There are now in the county 55 organized school districts which employ 70 teachers. The average salary paid these teachers is about $50 a month. The total value of school property in the county is $55,000. The population of the county now approximates 8,000. The total valuation placed on all taxable property of the county is upwards of $4,000,000. The improved lands are assessed at an average of $13.41 an acre. A ride through Polk county leads one over one of the best parts of the Northwest and some of the highest cultivated farms in the state are located within the limits of this county.

Sheridan, Oregon.—Sheridan is located in Yamhill county, within one and one-half miles of the northern boundary line of Polk county. It is reached by a spur of the narrow-gauge system of the Southern Pacific Railroad Company. This spur connects with the main line of the narrow-gauge system running from Portland to Airlie, at Sheridan Junction, seven miles distant from Sheri-

dan. A mixed passenger and freight train makes one round trip between Portland and Sheridan daily. In addition to the means of communication afforded Sheridan by rail, a daily stage line, carrying both mail and passengers, runs from Sheridan to McMinnville, the seat of Yamhill county and 14 miles distant from the former town.

Sheridan is incorporated and contains a present population of 400. The Yamhill river, which is not navigable to Sheridan, divides the town. A wooden bridge spans the stream connecting the main street of the town on either side of the river. The usual mercantile lines of business are represented at Sheridan by a number of small stores which seem to be well patronized. A flouring mill with a daily capacity of 100 barrels is located at this point. The section of country immediately tributary to Sheridan is fertile and the farmers are prosperous.

A good public school system is maintained at Sheridan. The school is presided over by a principal and two assistants and he average attendance is about 100 scholars. Three church denominations worship in buildings of their own. These are the Methodist, Baptist and Congregational. The town supports one weekly paper, *The Sun*, has one bank, two hotels and two well stocked livery stables.

Amity, Oregon.—Located in Yamhill county, but a short distance from the southern boundary, situated on a level plain and partly surrounded by a low range of hills, is the town of Amity. It is on the line of the West Side division of the Southern Pacific railroad, 57 miles south of Portland, and is within two and one-half miles of the line of the narrow-gauge system of the same company. Amity thus enjoys exceptional facilities for railroad connection with Portland and the larger valley towns. Two trains pass each way over the narrow-gauge lines daily, and one passenger train from the north and south stops at Amity's depot on the main line of the Southern Pacific.

The population of Amity is about 400 and the place is incorporated. While no manufacturing is done here at the present writing, its advantages as a site for future manufacturing enterprise are worthy of attention. The town is located in the midst of the richest of farming districts. The principal crops of this tributary section are wheat and hops, with considerable attention paid by the farmers to the cultivation of vegetables and fruit. The locality is one that has been settled for many years and the farms are principally in a high state of development.

One principal and an assistant have charge of the public school system of Amity, with an average number of pupils enrolled of 100. The Methodist, Baptist and Christian denominations maintain strong organizations and the congregation of each occupies a building of its own. The Odd Fellows hall is used for all public gatherings and has a seating capacity of about 200 people. *The Amity Popgun* handles the news features of the town in a truly effervescent style. Amity supports one hotel, and has a good livery stable for the accommodation of the traveling public.

Good garden and farming lands can be bought adjoining the town limits of Amity at the rate of $80 per acre. The value of land becomes less, of course, in a fair ratio as the distance from the town is increased. Mr. John L. Watt, a long-time resident of Amity, is thoroughly conversant with property values in the vicinity of the town and he is able at all times to offer good land at the prices indicated above.

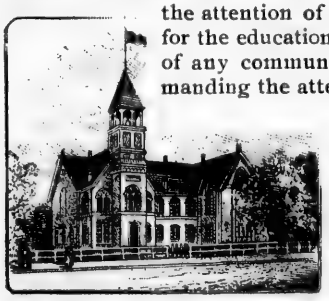
Monmouth, Oregon.—Monmouth is the ideal college town of Oregon. It occupies a site on a commanding eminence, and the climate is equable to a degree that practically avoids all extremes of heat or cold, and the air is salubrious Monmouth makes strict provision against the conducting of saloons, gambling houses or other places of vice within the town limits, and the entire community is law abiding and peaceably inclined.

Monmouth is incorporated and contains a present population of about 600. It is located on the narrow-gauge division of the Southern Pacific system of roads, 70 miles south of Portland. In addition to the facilities for transportation afforded by the narrow-gauge system, Monmouth is also connected with Independence, located on the main line of the Southern Pacific, 2½ miles distant, by a well equipped steam motor line. One passenger train a day makes a round trip between Monmouth and Portland, while hourly trips are made over the motor line between Monmouth and Independence.

Monmouth contains a number of well stocked business houses that are well supported. The Polk County Bank is a strong institution, with a capital stock of $50,000. Its officers are J. H. Hawley, president; P. L. Campbell, vice-president, and Ira C. Powell, cashier. The town is also the seat of the Oregon State Normal School, which is fully described in connection with the present article. Monmouth supports a good public school system, which is in charge of four experienced teachers. The average daily attendance at the public schools is about 150. The Christian and Methodist denominations maintain strong organizations here, and each worships in a church building of its own. Monmouth boasts of a good opera house, with a seating capacity of 400 people. The town also contains one good hotel and a single livery stable.

A rich farming district is tributary to Monmouth. This source of wealth, together with its well accredited healthfulness and its many advantages as an educational center of importance, will result in regularly increasing its population each successive year.

The Oregon State Normal School.—A question of vital importance to the prospective settler in a new country is the one of the educational facilities afforded. No town, however favorably located, ever attains a position to command the attention of the world without first having made every provision for the education of its youth, and the better the educational facilities of any community the better chance does the place enjoy for commanding the attention of the intelligent masses of the people.



OREGON STATE NORMAL SCHOOL, MONMOUTH.

Monmouth, in point of location, is an admirable site for the establishment of educational institutions. The location is a healthful one, the surroundings are all pleasant and the town is easily reached from any part of the Northwest by rail. Added to its natural advantages are restrictions imposed by the charter and town ordinances of Monmouth which make it absolutely impossible for saloons, gambling houses or other resorts which cater to vice in any form to be conducted within the municipal limits. Thus no allurements, immoral in their tone, are held out to the youth of this prosperous young town, and the status of the entire community is distinctly moral.

The Oregon State Normal School, located at Monmouth, is today one of the most prominent educational institutions of the state. By enactment of the legislature of 1891 this school was placed under the control of the state, general supervision of its affairs being exercised by a board of regents whose appointment rests with the Governor. Since the act placing the school under state control passed, the institution has made most rapid advancement, and as a seat of learning it now commands the attention of the best educational centers of the coast.

The curriculum of the Oregon State Normal School embraces four well defined courses of study. These are the elementary, regular, advanced and business. The first three courses named are especially designed for a thorough training of pupils who may desire to follow the profession of teaching, and graduates from either of these courses are awarded certificates which entitle them to teach in the schools of the state without further examination as to their qualifications. In addition to the regular courses prescribed, the thorough training in instrumental music and voice culture which the pupils of this school receive has proved a valuable and most attractive feature to both scholars and instructors.

The necessary expenses of a course at the Normal School have, by careful management on the part of the principal, been reduced to the lowest possible amount. Tuition for the entire school year does not exceed $25, while good board and room can be secured in Monmouth at from $2 to $2.50 a week. The school is particularly fortunate in having succeeded in obtaining the services of P. L. Campbell, A. B., a graduate of Harvard University, as president of the institution, and it is to the untiring and well directed efforts of this able educator that the great degree of efficiency which the school has attained during the last two years is largely due. J. B. Butler fills the important position of secretary of the board.

The building occupied by the State Normal School is a two-story brick structure containing eight rooms. It occupies a site on a high elevation of ground which commands a superb view of the Coast range of mountains on the west and the Willamette valley on the east, beyond which rise in sharp outlines the rugged chain of the Cascades. On a clear day Mt. Hood, Mt. Jefferson and the peaks of the Three Sisters are in plain view of the occupants of the school building. The surroundings of the Normal School are healthful and inviting, the courses of study are well defined, the discipline is good without being unnecessarily severe, and the future growth of the school, both in its importance as a state institution and as a prominent seat of learning is fully assured.

Corvallis, Oregon.—Corvallis is the judicial seat of Benton county. It is located in the very heart of the Willamette valley, and is the central city of the richest part of Benton county. It is the present southern terminus of the West Side division of the Southern Pacific railroad; it is at the junction of the Southern Pacific and the Willamette Valley & Coast (Oregon Pacific) railroads, the latter of which roads is the important line extending east from the deep-water terminus of Yaquina Bay, 72 miles west of Corvallis, to Halstead, a point 56 miles east of Corvallis and 128 miles from Yaquina. The road now known as the Oregon Pacific, will ultimately be extended east to a connection with some transcontinental line at or near Boise City, Idaho.

Corvallis is afforded excellent transportation facilities by these two lines, and daily trains are operated over both roads, one train running north to Portland, 96 miles distant, and the other over the Oregon Pacific, making connection between

Corvallis and Albany, on the east, and with Yaquina Bay, on the west. East of Albany trains also run over the same road to the end of the track at Halstead. At Yaquina Bay a line of steamers operated in conjunction with the railroad company, makes connection with trains of the Oregon Pacific for San Francisco. In addition to the lines of transportation afforded Corvallis by the railroads, the Willamette river is also navigable between this city and Portland. A combined passenger and freight steamer makes two round trips a week between Corvallis and Portland, and considerable traffic is handled over this line.

BENTON COUNTY COURT HOUSE, CORVALLIS.

The present population of Corvallis is about 2,500. While the great source of wealth of the city has always been in the rich tributary farming district, the manufacturing possibilities of Corvallis have never been neglected. It is now the seat of the Corvallis Carriage and Wagon Factory, which has now been in successful operation for two years past. This company gives constant employment to 50 men, and it has a capacity for turning out 6,000 vehicles a year. The plant is thoroughly equipped for the handling of a very large business, and its output finds a sale in all parts of the coast. Two large roller flouring mills are also located at Corvallis, each with a daily capacity of 100 barrels. The wheat grown in this part of the state makes a special high quality of flour, and the flour manufactured in Corvallis stands high wherever it is known. The other manufacturing industries of the place are represented by one large sawmill, with a daily capacity of 40,000 feet of lumber, two sash and door factories, a foundry and machine shop, and few other small plants. All lines of business are well represented here. The place supports one strong but conservative banking house.

Corvallis is the seat of the State Agricultural College. The means for running this college are supplied both by the state and by the United States governments. The annual income of the school from these two sources, at the present time, is about $50,000, a sum sufficient to conduct the college here on a plan that is productive of good results. Every department of industrial training at this school is presided over by a thoroughly competent and practical instructor. The college farm which surrounds the school contains about 185 acres. This land adjoins the city limits of Corvallis, and is all in a high state of cultivation. In addition to the main college building, which was erected at a cost of about $30,000, a large dormitory for male students, a smaller dormitory for lady students, and a number of buildings used for experiments in mechanical work, have since been erected on the college grounds. The average attendance at the college during the past year has been about 250 scholars.

PHOTO. BY J. L. UNDERWOOD.

WATER TOWER, CORVALLIS.

An excellent system of public schools is maintained at Corvallis. The course of instruction includes primary, grammar and high school. The average daily attendance at the public schools is about 450. A new and handsome frame building for school purposes has been erected at Corvallis during the past year at a cost of about $20,000.

AGRICULTURAL COLLEGE, CORVALLIS.

The most striking and attractive building at Corvallis is the county court house, the construction of which involved an outlay of $75,000. This building occupies a beautiful site, but one block distant from the main business thoroughfare of the city, and it is perfectly arranged in every way for the expeditious handling of the large public business of Benton county.

Corvallis has a good system of water works, with a capacity of 1,000,000 gallons of water per day. Pressure is obtained in the city mains by a large reservoir, well elevated, and located in the heart of the city. Corvallis maintains a well drilled volunteer fire department. The city is thoroughly lighted by arc and incandescent lamps. A well equipped horse-car line is operated in the city. Eight prosperous church organizations are supported here, and the city boasts of a number of very fine church buildings. Two weekly newspapers, *The Times* and *The Gazette*, and one semi-weekly paper, *The Benton County Leader*, are published here. Commercial travelers and tourists have the choice of three hotels at Corvallis, and two well stocked livery stables supply plenty of good teams for driving.

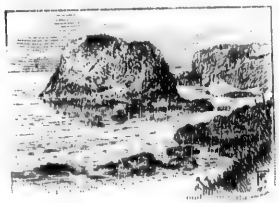
NEW PUBLIC SCHOOL HOUSE, CORVALLIS.

The growth of Corvallis has been considerably retarded at times by the unsettled condition of the practically bankrupt Oregon Pacific Railroad Company. The place, by virtue of location alone, however, will always command a large and constantly increasing trade, and with the status of the railroad problem at Corvallis practically settled, the city will doubtless make very material advancement in the future.

Benton County, Oregon.—The center of Benton County is within a few miles of the center of the Willamette valley, from north to south. It is bounded on the north by Polk county, on the south by Linn, on the east by Lane, and on the west by Lincoln. Its area is about 573 square miles, and its present population is about 5,000.

The resources of Benton county are chiefly agricultural, wheat and oats being the principal crops grown. Wheat yields, in this section, from 20 to 50 bushels per acre, and the yield of oats per acre is from 35 to 60 bushels. Second in importance to the raising of cereals in the county is the growing of hops. Hop culture yields a greater return per acre than does the raising of any other crop. This has led to increased attention being paid by the farmers of this part of the state to hop culture each successive year. Like other favored parts of the valley, Benton is especially adapted to dairying on a large scale. There is a greater demand for Benton county butter than the county now supplies. With the price of good butter in Oregon ranging in price from 20 cents to 45 cents a pound, dairying can be conducted in the state on a large scale with the most profitable returns.

PHOTO. BY J. L. UNDERWOOD



SCENE NEAR YAQUIN BAY.

The soil and climate of Benton county are especially adapted to the successful cultivation of fruit and all kinds of vegetables. An instance is recorded as attesting the value of lands in the county for fruit-growing purposes, where four apple trees each gave a net return of $7.50 from the fruit produced during the single season. With an average of 70 trees to the acre, the yield from a single acre of apple trees, at this rate, would insure a return of $525. One acre of land in this county, planted to prunes and properly cultivated, will produce $300 worth of fruit.

PHOTO. BY J. L. UNDERWOOD.

JUMP-OFF-JOE ROCK, YAQUINA BAY.

Benton is perhaps more distinctly an agricultural section than is any other county of the state. Its soil is fertile to a degree that insures large crops through any number of years, this land is easily worked, and the climate is good. The farmers of the county enjoy the best of transportation facilities in the Southern Pacific crossing the county from north to south, the Oregon Pacific, which forms connection with the ocean steamers at Yaquina Bay, and in the line of light-draught steamers which ply on the Willamette river between Corvallis and Portland.

Yaquina Bay, Oregon.—Among the ocean waterways indenting the Oregon coast, already mentioned in this work under the head, "Rivers and Harbors," Yaquina Bay occupies a position second only to the mouth of the Columbia in commercial importance. The arm of the sea known as Yaquina Bay breaks the ocean line in Lincoln county. This county was set off from Benton county in 1892 by an act of the legislature. It also embraces within its limits a small portion of land formerly contained in Tillamook county.

STEAMER OUTWARD BOUND, YAQUINA BAY.

The management of this seaport has been in the hands of the United States engineering department for improvement since 1883. The appropriations so far made for harbor improvements here amount to $550,000. This sum has been carefully expended. Two jetties, one on the south and one on the north side of the bay, have been built far out into the sea. The effect of these has been to increase the depth of water on the bar from 7 to 18 feet at low tide and to deepen the channel as far inland as Yaquina City, three and one-half miles from the ocean. At this writing work on these improvements has stopped, the present appropriation having been exhausted. It is expected, however, that another appropriation will be made by congress now in session, and that work will be resumed in the spring.

The survey made by United States surveyors in 1893 showed conclusively that the outlay already made had not been wasted, but had resulted in great improvement to the bar and harbor channel. A line of steamers is operated in connection with the Oregon Pacific railroad from Yaquina on the bay to San Francisco. These steamers and the Oregon Pacific railroad carry passengers and freight from the Willamette valley points to California. The importance of the transportation facili-

SURF BATHING, YAQUINA BAY.

ties thus afforded cannot be overestimated. Shipments from Yaquina Bay include lumber, wheat, honey, fish and oysters, besides a large amount of miscellaneous merchandise.

The oysters found in the natural beds in the upper Yaquina Bay are small but of excellent quality. The marketing of these oysters was the first important industry on the bay and has been going on for nearly 30 years. They are now cultivated to a considerable extent on artificial beds in addition to those found on the natural beds, and the average annual catch now runs up to about 2,500 bushels. These find a ready sale in the Willamette valley and are shipped by steamer to San Francisco. About the middle of the summer salmon begin to run into Yaquina Bay in large numbers. These are caught in gill nets and seines. Many or them are shipped fresh to interior points, but the greater portion are put up by the canneries on the bay. The ocean adjacent to Yaquina Bay abounds in a variety of deep-sea food fishes such as bass, cod, rock cod, kelp, sole and the delicious halibut. The catching and marketing of these fish grows in volume and importance every year, and will eventually develop into a very important business.

PHOTO. BY EMERY

BATHING, NORTH JETTY, YAQUINA BAY.

The country surrounding Yaquina Bay is excellently adapted to fruit culture, especially prunes. Large areas of timber land are found in the interior in Lincoln and Benton counties, along the line of the Oregon Pacific railroad, which finds an ocean terminus at the bay. These natural resources alone justify the expenditures made and projected by the government for the improvement of the harbor. The Oregon Pacific railroad survey reaches to Boise City, Idaho, where a connection will be made for Eastern points. The Oregon Pacific railroad has been in the hands of a receiver, but it has been purchased by capitalists possibly able to carry out the original intentions of those who established the road.

Yaquina, Oregon.—Yaquina is the port of entry for the Yaquina district. It is located on the upper end of Yaquina Bay, three and one-half miles from the ocean, at the point where the Yaquina river empties into the bay. Yaquina is the ocean terminus of the Oregon Pacific railroad and is 72 miles west from Corvallis. A line of passenger and freight steamers plies regularly between Yaquina and San Francisco. The harbor at Yaquina is land-locked and has a depth of water in the channel varying from 35 to 40 feet. The harbor and docking facilities at Yaquina are the best on the bay. There are two sawmills in operation here and the railroad shops of the Oregon Pacific railroad are located at this point. The town is supplied with water by means of an excellent gravity system of water works. The finest building in town at present is the Yaquina hotel, owned by the railroad company. Educational advantages are offered by two excellent schools. Four religious denominations, the Methodist, Episcopal, Presbyterian and Baptist have places of worship here. The population of Yaquina is about 200.

PHOTO. BY J. L. UNDERWOOD.

CAPE FOULWEATHER - NEAR YAQUINA BAY.

Newport, Oregon.—Newport, at the entrance to Yaquina Bay, was first settled in 1867, and was incorporated as a city in 1882. It is 75½ miles west of Corvallis, and 165 miles southwest of Portland by rail and 220 miles by water. Newport is today a town of about 500 inhabitants. It is a noted Oregon summer resort, and thousands of people from all over the state spend the summer months here. The climate is delightful in the summer season and the numerous pleasures afforded by sea-bathing, fishing and excursions to neighboring points of interest, are great attractions to visitors. Two hotels accommodate a number of summer guests, but a large proportion of the visitors find their enjoyment in camping out during the pleasant season. A small steamer meets the trains over the Oregon Pacific railroad at Yaquina and carries passengers to Newport, the distance between the two points being three and one-half miles.

PHOTO. BY CRAWFORD & PAXTON.

YAQUINA BAY AT NEWPORT

The business part of Newport consists of one long street which extends along the water front. The residence portion is situated on a plateau directly back of this street. Newport boasts of an opera house with a seating capacity of 600, which is frequently visited by traveling theatrical companies. An excellent public school is conducted by two teachers of experience. Religious matters are looked after by the Methodist, Presbyterian, Episcopal and Catholic denominations, all of whom have places of worship at Newport. The shipments from Newport consist of lumber from two sawmills, oysters and sea-fish.

The Coos Bay Country, Oregon.—In Southwestern Oregon is a region of great natural wealth. Possessing a most delightful climate, covered with the heaviest growth of timber in the state, and rich in most valuable deposits of coal, the Coos Bay country offers a splendid field for the investment of capital, and for settlement by a progressive and intelligent people.

What is here referred to as the Coos Bay country stretches along the coast of Oregon for a distance of 130 miles, terminating at the south on the California boundary line. It embraces the counties of Coos and Curry, which together have an area of about 3,700 square miles. From the ocean the land of this section gradually rises by a succession of benches until the crest of the Coast range of mountains is reached. The average width of the strip between this range and the ocean, in this part of the state, is about 40 miles. Numerous streams water the Coos Bay country. The largest of these are the Rogue and Coquille rivers, both of which are navigable for about 40 miles inland. At the mouth of the Rogue river is the town of Gold Beach, the county seat of Curry. This prosperous little community is the shipping and trading center of an exceptionally rich but sparsely settled farming, lumbering and mining country. On the coast at the mouth of the river of the same name, about five miles north of the California boundary line, is the town of Chetco. Port Orford, situated on Port Orford Bay, along this coast, is the place selected by the United States engineers as the harbor of refuge for the Oregon coast.

COAL BUNKERS, MARSHFIELD, COOS BAY.

Coos Bay, the largest and best harbor on the coast of Oregon south of the entrance to the Columbia river, is located at the mouth of the Coos river. Around the shores of this bay have sprung up several ambitious and wide-awake towns. Marshfield, the largest of these towns, has a present population of about 2,500. It is an enterprising place, having water works, electric lights, a newspaper, a bank, sawmills, tanneries, furniture and a number of other manufacturing institutions. Other towns in Coos county are Bandon, Randolph, Parkersburg, Coquille, Norway, Arago, Angora and Empire City.

Nature has not only endowed the Coos Bay country with a remarkable diversity of resources, but it has also given it a climate in which flowers blossom outdoors the year round. The grass of this section is always green. Observations covering a period of 14 years show that at Coos Bay the greatest snowfall at any one time during this period was 1¼ inches. There were 8 years out of the 14 when absolutely no snow fell in this section. The thermometer here seldom registers below the freezing point, and the maximum summer heat is generally below 80° Farenheit. The soil of the lowlands of the Coos Bay country is a rich alluvium. From 600 to 800 bushels of potatoes to the acre is not an exceptional yield in this section, and 50 to 60 tons of sugar beets is an average crop here. All kinds of semi-tropical fruits do well here.

The soil of the bench lands of the Coos Bay country is adapted to the growth of fruits, vegetables, grasses and grains, but the yields of these products on the higher elevations is not as great as they are in the lower lands. On the mountainous districts of the country are excellent grazing grounds especially adapted to sheep raising, and this industry is now an important one here. The greatest industry of the Coos Bay country at the present time, however, is the manufacture of lumber. The immense forests of Coos and Curry counties cover an area of 1,050,000 acres. These forests contain 24,200,000,000 feet of the finest timber in the world. The magnitude of these figures can be appreciated when it is known that Minnesota contains today only 12,749,526,000 feet of standing timber, and Michigan, another great lumbering state, contains 100,000,000 feet less than does the Coos Bay country, a small part of Oregon. Nearly 5,000,000,000 feet of the timber in the Coos Bay country is white or Port Orford cedar. This beautiful tree is not found north of the Umpqua river. As an ornamental tree for landscape gardening it is doubtful if North America possesses anything finer in its forests than the Port Orford cedar. So completely marketable is this tree that every part of it except the bark is utilized. The log from the tree is cut into boards and square timber, the slabs into pieces for broom handles and laths, and the scraps that are left are cut into blocks for the manufacture of matches. The lumber manufactured in the Coos Bay country finds its principal market in San Francisco, though a considerable portion of this lumber is shipped to other coast points. The shipments of lumber from this district now aggregate about 100,000,000 feet annually.

With all its great wealth above the ground, the Coos Bay country has another vast store of riches lying below the surface. Underlying 500 miles of its surface are coal measures of an average depth of 35 feet. The quality of this coal for commercial purposes is now fully established. The coal mines of Coos Bay have produced steadily since 1852. Most of the output of these mines is shipped to San Francisco. The sands of the ocean beach of this section and the gravel along the courses of the numerous streams are impregnated with gold. Placer mining has been succesful

carried on here for many years past. Owing, however, to the primitive methods adopted here the output of the precious metals has been small. In 1892 the Coos Bay country produced $30,000 in gold. Fishing is another important industry of this region. The bays and streams along the coast here teem with the finest food fishes. At Gold Beach a salmon-canning establishment annually packs 30,000 cases of salmon. The development of the Coos Bay country has been exceedingly slow considering the vast resources it possesses. This has been due entirely to the lack of railroad facilities for handling the business of the country. At present its only land communication with the rest of Oregon is by means of wagon roads. The Coos

DOCKS, EMPIRE CITY, COOS BAY.

Bay, Roseburg & Eastern railroad, now under construction between Marshfield and Roseburg, follows closely the line of the present stage road through the pass of the Coast range mountains. The part of this line between Marshfield and Coquille City, a distance of 25 miles, is now finished and trains are running over this road. Beyond Coquille City the road is graded to Myrtle Point. The full surveys for the line between Marshfield and Roseburg have been made, and it was the financial stringency of last year alone that prevented the completion of the road before this time.

Hood River, Oregon.—Hood River is located in Wasco county, 64 miles east of Portland, on the line of the Union Pacific railroad, and at the junction of the Columbia and Hood rivers. It has a present population of about 350, and is the trading and shipping point for the rich Hood River valley. The site of the town is a picturesque one, sloping as it does to the north towards the Columbia river, and to the east towards the smaller stream of Hood river. It commands a magnificent view of some of the best Columbia river scenery, and it is today one of the popular inland summer resorts of the state.

The town of Hood River contains two handsome church edifices, owned respectively by the Congregational and United Brethren denominations. The Methodists hold services in temporary quarters here. The public school here is held in a building which is inadequate to properly accommodate the pupils in attendance. It is probable that a larger and better school building will be erected during the present year. Two teachers are employed in the public school here, and the average daily attendance of scholars is about 80. Hood River contains a dozen or more stores, two hotels, and two well stocked livery stables. A free reading-room is maintained in the town for the accommodation of the public, and a good weekly newspaper, *The Hood River Glacier*, is published at this point. The manufacturing enterprises of the town are represented by the Hood River Manufacturing Company, which turns out everything in the line of woodwork.

The Hood River valley is about 18 miles in length by about 8 miles in width. It maintains a level of from 400 to 1,000 feet above the sea. The soil of this valley is rich and varied, and will produce all kinds of cereals and fruits equally as well.

This is one of the finest fruit belts in the state. The Hood river peaches are unexcelled in quality, and large quantities of this delicate fruit raised here yearly find a ready sale in the Portland market. Apples, pears, prunes, cherries, and all the smaller fruits do well on this soil. The farmers of the Hood River valley place great reliance on their strawberry crops. The berries of this fruit grown here attain a remarkable size, the yields are always large, and the fruit is of the best quality. In 1892 the returns from the strawberry crop of the Hood River valley alone amounted to $23,000, and the average value of the product of each acre planted in strawberries here during that year was about $600. During the season of 1893 the area of this land planted in strawberries was about three times what it was the previous year. The principal markets for Hood river strawberries are in Montana and Portland.

In the mountains around Hood river is a wealth in fine timber that is yet hardly touched. This river has its source at the base of the east and north slopes of Mount Hood, and for a distance of 10 miles from the mountain it has an average fall of about 70 feet to the mile. This stream is capable of furnishing a large available water power, which will some day be largely utilized for sawing the timber found adjoining the stream.

The town of Hood River is fast becoming popular as a summer resort. A salubrious climate, with the attraction of the finest drives, flower-dressed hills, and pure mountain streams of the coldest water filled with the gamiest of brook trout, have combined to make this one of the most popular resorts for recreation in the state.

Mount Hood, the monarch of the Cascades, with its covering of perpetual snow, looms up plainly in the distance from the town of Hood River. The mountain is reached from this point by an easy stage ride of but 28 miles in length.

In the neighborhood of Hood River is considerable government land still subject to entry. This land, while lying some distance back from the town, contains fine soil and is perfectly adapted to fruit culture. All of this land will be occupied a few years hence, and the town of Hood River will ultimately become one of the most important fruit-shipping points on the Columbia river.

The Dalles, Oregon.—The Dalles is the capital city of Wasco county and its present population is about 3,000. It is located on the south bank of the Columbia river, 88 miles east of Portland, and on the main line of the Union Pacific railroad. It is the head of navigation on the Middle Columbia river, but with the completion of the government locks at the Cascades, The Dalles will enjoy the benefits of an unbroken water route to Portland and the sea.

The most important manufacturing industries located at The Dalles at the present time are a roller flouring mill with a capacity of 125 barrels a day, a brewery, a planing mill and a sash and door factory. Two miles east of The Dalles on the Columbia river is a large salmon cannery which cans and packs annually from 25,000 to 40,000 cases. In the immediate vicinity of the town are 10 fish-wheels. During 1890 upwards of 3,000,000 pounds of fish were packed and shipped from this point, in addition to large shipments of fresh fish, for the Eastern markets.

Every line of business is well represented in The Dalles. The town supports three banks, three newspapers, *The Daily Times-Mountaineer*, *The Daily Chronicle*, and *The Weekly Sun*. The public schools are held in four large buildings, and the

average daily attendance at these schools is about 650. A state normal school and a Catholic academy are also maintained here. The Congregational, Baptist, Methodist, Christian, Adventist and Catholic denominations own their own places of worship here. The Dalles possesses an excellent system of water works and an arc and incandescent electric light plant. A flume canal extends back from The Dalles for a distance of 18 miles to the mountains. This flume has a daily carrying capacity of 125,000 feet of lumber, which is floated to The Dalles from the mills back of the place.

APPROACH TO THE DALLES FROM THE WEST.

The mean fall of the Columbia river from Celilo to The Dalles, a distance of 13 miles, is 100 feet. This constitutes the rapids of the dalles which are not navigable, but which will be ultimately overcome either by canal and locks or boat railroad. The Columbia river drains over 300,000 square miles and for a distance of over 100 miles above Celilo the depth of water in this great stream is 50 feet. The available power afforded by this river at The Dalles is estimated to be fully equal to that of the Spokane river at Spokane or of the Falls of St. Anthony at Minneapolis.

The chief exports at The Dalles, are salmon, wool, hides, horses, cattle, sheep, and fruit. An immense extent of country extending in some directions as far as 150 miles back from The Dalles pays tribute to this place. During 1890 there were shipped out of this tributary section 200 carloads of hides, nearly 10,000,000 pounds of wool, 4,200 head of cattle, 100,000 head of sheep, 1,800 head of horses, and 100 carloads of fruit.

Cheap means of transportation is afforded The Dalles by the Union Pacific railroad, which follows the Columbia river for 126 miles east and for about 75 miles west and connects direct with Portland and the East, and also by the steamers of The Dalles, Portland and Astoria Navigation Company as well as by the steamer line of the Union Pacific, both of which water lines reach Portland by making a short transfer at The Cascades. The completion of the Cascade locks will mark a new epoch in the history of The Dalles and will greatly advance the town's prosperity.

Wasco County, Oregon.—Wasco county is separated from the state of Washington on the north by the Columbia river. On the east it is bounded by Sherman and Gilliam counties. It extends south as far as the northern boundary of Crook, and on the west it reaches to the summit of the Cascade range of mountains. The county has an area of 3,024 square miles and it contains a present population of about 9,500.

Along the Columbia river line of Wasco county are high bluffs of basaltic rock. This is the unfavorable part of the county that presents itself to the eyes of the tourists who follow the Columbia river route of the Union Pacific railroad. Back of these bluffs, however, are miles of the finest farming lands in the Northwest. These lands are adapted perfectly to diversified farming and stock raising, all kinds of

grains and fruit doing well here. The grazing lands of the county are covered with a heavy growth of bunch grass in which cattle keep fat throughout nearly the entire year. The western portion of the county, which extends into the Cascade Mountains, is principally covered with a dense forest growth. The timber found here consists of fir, larch, tamarack, hemlock, pine and cedar. The higher elevations of the county are on the average of from 3,000 to 4,000 feet above sea level. The timber belts are crossed by clear mountain streams, which in many cases carry a sufficient volume of water for rafting purposes. The most important of these streams are the White and Deschutes rivers.

The fruit growing possibilities of the county are great. Apples, peaches, apricots, plums, prunes, cherries, grapes, pears and small fruits of all kinds are raised in the county to a considerable extent. The melons of Wasco county vie in quality and size with the best productions of the southern part of the state. These melons find a ready sale at The Dalles, and are shipped as far east as Chicago.

The unusual dryness of the climate of Wasco county makes a residence here one peculiarly free from disease. The soil of the lands of the county is so deep, however, that a failure of crops here has never been recorded. The wheat yield in the county averages from 20 to 40 bushels per acre. In 1891 there were 3,000,000 acres of tilled land in the county, and during the past two years this area of land in cultivation has been greatly increased. The census of 1890 showed that there were 218,000 sheep, 20,000 horses, 25,000 cattle, and 5,000 hogs in the county. The total assessment of the county in 1891 showed a valuation of $3,578,745.

Arlington, Oregon.—Arlington is the largest town in Gilliam county. It is located on the Columbia river, at about the center of the county on a line drawn east and west, and is also on the main line of the Union Pacific railroad, 142 miles east of Portland. The Columbia river affords the merchants of Arlington direct water communication with Pasco where connection is made with the line of the Northern Pacific for Tacoma, Seattle and Spokane.

The present population of Arlington is about 350. Two national banks are located here, as well as two large general merchandise stores and a number of smaller business houses. The town has a good water-works system and maintains a fire department. It also supports a public school, two churches, a free reading-room and a weekly newspaper, *The Arlington Record.*

Arlington lost much of the trade which formerly came to this point by the completion of the Heppner branch of the Union Pacific in 1888. This branch line of road has done much to develop the resources of Morrow county, the principal trade of which section, instead of coming to Arlington as it formerly did, now goes direct to Heppner, the county seat. Arlington, from advantages of location on the Columbia river, and also on the main line of the Union Pacific, will perhaps always remain a prominent shipping point, and it today enjoys the distinction of being the leading town on the Columbia river east of The Dalles.

Heppner, Oregon.—Heppner is the judicial seat of Morrow county and contains a present population of about 1,000. It is the terminus of the Heppner branch of the Union Pacific railroad which connects with the main line at Willow's Junction, 45 miles distant. This branch was completed in 1888, since which time Heppner has enjoyed a steady and rapid growth.

The principal business portion of Heppner is confined to one wide street which,

for a distance of more than two blocks, is built up on either side with one and two-story brick buildings. A number of general merchandise stores located at this point do an annual business of from $25,000 to $150,000 each. Near the railroad at the foot of the main street, are two large warehouses which have a combined storing capacity of 1,250,000 pounds of wool, and which are also used for the storage of wheat. Sheep raising and wool growing may be called the two vital interests of Heppner and Morrow county. In 1892, 2,350,000 pounds of wool, most of which was raised in Morrow county, passed through the Heppner warehouses. The money received from the sale of 100,000 sheep, 8,000 head of cattle, 2,000 head of horses and 500,000 bushels of wheat passed through the Heppner banks during the same year. Wool growing and stock raising are the two industries of Morrow county that are never known to fail. The climate here is especially easy on stock, including cattle and sheep. Heppner, and the country of which it is the trading center, have always been prosperous from a financial standpoint and many large fortunes have been amassed here in the legitimate lines of trade.

PHOTO. BY THEO. DANNER.

PUBLIC SCHOOL, HEPPNER

Heppner contains one roller-flouring mill with a daily capacity of 70 barrels. This mill is operated by water power obtained from Willow creek, a small but rapid stream which flows through the town. The city's water supply is obtained from an artesian well, 600 feet deep. The water from this well is pumped into a reservoir located at a sufficient elevation above the city to insure an ample pressure as a protection against fire. The capacity of the reservoir is about 100,000 gallons. The two well drilled volunteer hose companies maintained here have often demonstrated their ability to protect the city against any fire that might start here. Water-mains extend along the principal streets of Heppner and hydrants are located at all the prominent street crossings. The city is thoroughly lighted by an excellent system of arc and incandescent lamps, the system covering the main streets, the business blocks and private residences.

The school district in which Heppner is located erected during 1892 a handsome eight-room frame school building at a cost of $12,000. Primary and advanced grades of study are taught in the public schools here which are presided over by six efficient teachers. The average number of scholars in attendance at the public schools is about 350. The Baptist, two Methodist and Catholic denominations own church buildings at Heppner. The town boasts of a good opera house with a seating capacity of 500. Two weekly newspapers, *The Gazette* and *The Record*, are published at Heppner. The town has three hotels, one of which The Palace, is a three-story brick recently erected at a cost of $40,000. The bonded indebtedness of Heppner in 1892 was $20,000 while the assessed valuation of town property in the same year made the substantial showing of $400,000.

Heppner's location in the valley of Willow creek, surrounded as it is by a range of hills, is an attractive one. These hills not only add to the general beauty of Heppner's surroundings, but they also act as a protection against the strong wintry blasts which sometimes sweep down over the plains of Eastern Oregon. The town is the natural trading center of a very wide area of rich country and it will always be one of the principal centers of population of Eastern Oregon.

The oldest banking institution in Heppner is the First National Bank which was

incorporated in 1887, with a capital stock of $50,000. A recent statement of the bank shows its surplus and undivided profits to be $32,000. The officers are Columbus A. Rhea, president; Frank Kellogg, vice-president, and Geo. Conser, cashier. The directors are Columbus A. Rhea, T. A. Rhea, J. P. Rhea, J. B. Natter and Frank Kellogg. The First National Bank has always held the confidence of the community in which it is located. Its principal stockholders are wealthy and prominent sheep raisers in Morrow county, and any communications addressed to the bank concerning the purchase of wool, sheep, cattle and horses will receive prompt attention. The First National Bank occupies quarters in a recently erected brick block, an illustration of which is published in connection with the present article on Heppner.

FIRST NATIONAL BANK, HEPPNER.

The National Bank of Heppner began business in 1889 with a capital stock of $50,000. It occupies spacious quarters in the brick block shown by the accompanying illustration. This fine block was recently erected by the Heppner Building and Loan Association. The officers of the bank are Wm. Penland, president; O. E Farnsworth, vice-president, and E. R. Bishop is the genial cashier. The National Bank of Heppner has done an increasing business since the first year of its existence. It now declares a dividend of 10 per cent yearly. A recent statement of the bank shows its net profits to be $14,000. The present directors are P. C. Thompson, Wm. Penland, E. R. Bishop, O. E. Farnsworth, E. D. Rood and G. W. Swaggert, all of whom are prominently identified with the best business interests of Heppner. The stockholders of the National Bank of Heppner are composed principally of stockmen, and any information desired concerning the purchase of sheep and cattle in this part of the state will be cheerfully furnished by this bank.

It is a noteworthy fact that the largest business houses of Heppner are owned and conducted by comparatively young men. A striking illustration of this fact is found in the McFarland Mercantile Company, the *personnel* of which is composed of Frank McFarland, Homer McFarland and Emil Voruz. Neither of these gentlemen is over 33 years of age. The McFarland Mercantile Company is engaged in the wholesale and retail general merchandise business and carries a stock of goods valued at $40,000. This is the largest mercantile institution in Heppner and Morrow county. The company do an annual business of about $150,000. Their trade reaches out into Grant, Harney, Gilliam and Umatilla counties. In addition to their regular business, this enterprising young firm buys and sells annually large quantities of wool, hides and pelts, grain and various farm products. Messrs. McFarland & Voruz have only been associated in business together since 1892, but the gentlemen have lived in the eastern part of the state for a number of years past. The senior member of the firm, Mr. Frank McFarland, is considered one of the most successful merchants in Eastern

MCFARLAND MERCANTILE COMPANY AND NATIONAL BANK OF HEPPNER BLOCK, HEPPNER.

Oregon, he having been engaged in business in that part of the state for the past 10 or 15 years. He also has large interests in Southern California. The accompanying illustration shows the handsome brick block in which the McFarland Mercantile Company have their large stores.

PHOTO. BY THEO. DANNER.

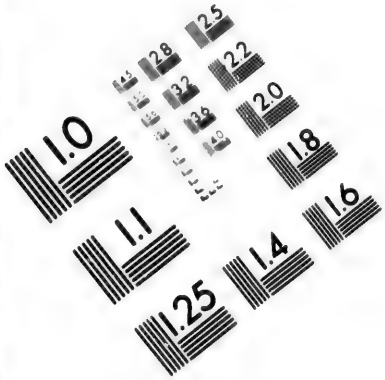
PALACE HOTEL, HEPPNER.

The Palace Hotel of Heppner, shown by the accompanying illustration, is a strictly modern house in all its appointments. It is a three-story brick building, practically fire-proof, provided with water, baths and electric lights. A 'buss meets all trains and a sample room in the hotel is at the disposal of commercial travelers. The house was built three years ago at a cost of about $40,000 by a local stock company. The present proprietress is Mrs. M. Von Cadow, who has earned for the Palace hotel an enviable reputation as a first-class hostelry. The table service and sleeping apartments of the Palace are far above the average of the leading hotels of the interior points of the state.

Morrow County, Oregon.—Morrow is one of the prominent counties of Eastern Oregon. It is bounded on the north by the Columbia river, on the east by Umatilla county, on the south by Grant, and on the west by Gilliam. This county is about 35x75 miles in size. The main line of the Union Pacific railroad runs along the northern boundary. A branch extends south from the main line, running through the Willow Creek valley and terminating at Heppner, 45 miles distant, from Willows Junction, where the branch and the main line connect. Since the completion of this branch line of road a number of small towns have sprung up along its course. The trade of these settlements is held principally by the merchants of Heppner, the county seat.

It is only a few years since Morrow county was regarded as a mere stock range. With the increase of population in the county, however, there has been encouraged the tendency among the settlers to pay more attention to diversified farming. The soil of the lands lying along the numerous creeks in the county is highly productive. The general nature of the country is rolling, but this undulating surface is covered with a heavy growth of bunch grass. Adjacent to the Columbia river is a low, level stretch of land, varying in width from four to eight miles, which is sandy and is covered with sage brush. The southern portion of the county is rich in timber resources. There is still much land in Morrow county that can be obtained from the government, and good land in the county can be bought from private parties at from $5 to $50 an acre.

The principal industries of Morrow county, at the present time, are wool growing and stock raising. The climate of the county is especially adapted to the raising of sheep. A reference to the article on Heppner, published in connection with the present article, will furnish the reader with much valuable information on the extent of the wool-growing interest of this county. During 1892 500,000 bushels of wheat were raised in Morrow county, and this wheat was sold at prices varying from 68 cents to 85 cents a bushel. The assessable value of property in the county during the same year was $2,088,308. The present population of the county is about 4,500, and the population of this part of the state is rapidly increasing.



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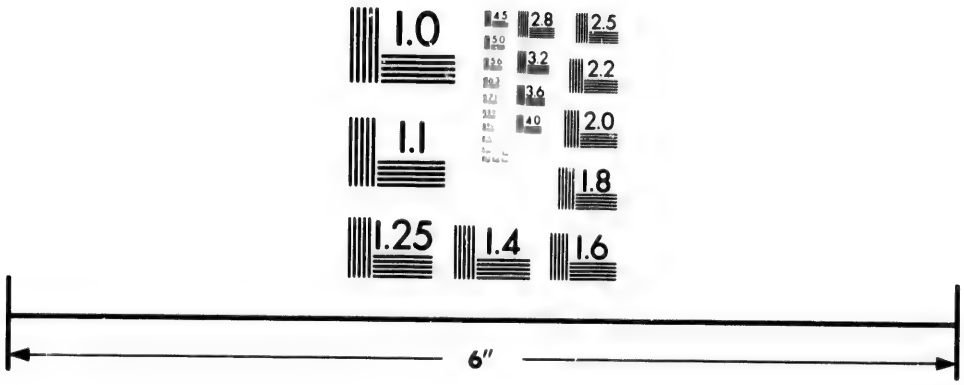

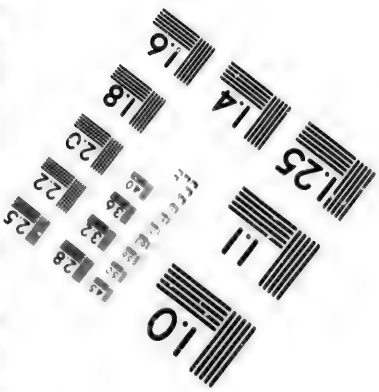

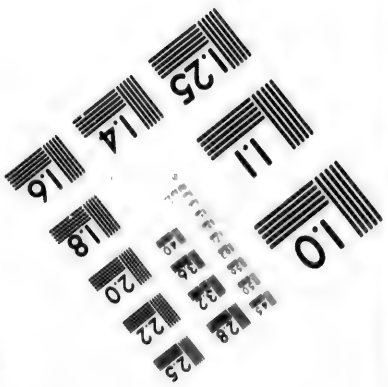

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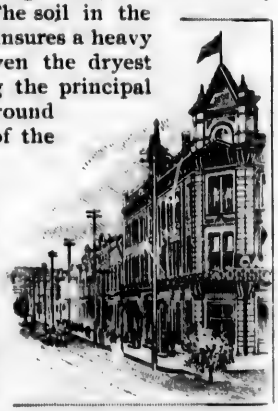
Gilliam County, Oregon.—Gilliam county is bounded on the north by the Columbia river, on the east by Morrow and Grant counties, on the south by Crook, and on the west by the counties of Sherman and Wasco. Condon is the county seat. This town is located near the geographical center of the county, and is in the midst of a rich farming district. Condon has a population of about 200, and it is a flourishing business point.

The total area of Gilliam county is about 2,000 square miles. It fronts on the Columbia river for a distance of about 30 miles, and extends south for a distance of 70 miles to a spur of the Blue Mountains. Aside from the mountainous sections of the county, it is one vast valley stretch of arable land. Wheat, wool and live stock are the principal products of the county. In 1891 800,000 bushels of wheat were raised in Gilliam county, and the average price realized for this wheat was 78 cents a bushel. The average yield of wheat to the acre, as shown by statistics carefully compiled in that year, was 25 bushels. In the same year the shipments of wool from Gilliam county aggregated 2,000,000 pounds, and this wool brought an average price of 12½ cents a pound. The shipments of live stock, during 1891, amounted to 62 carloads of horses, 49 carloads of cattle, and 15 carloads of sheep.

Gilliam is one of the richest counties in natural resources in the state. Its present population is only 3,600, but from the fact that there are 600,000 acres of government land in the county still unoccupied, and that more than one-half of this unoccupied land is considered valuable for agricultural purposes, it is highly probable that the population of the county will be greatly increased during the next few years.

Pendleton, Oregon.—Pendleton is a city of attractive environments. It is located on the Umatilla river, a stream of considerable magnitude, in a little valley nestling among a low range of highly fertile hills. The soil in the immediate vicinity of the city is well watered, which insures a heavy growth of vegetation and shrubbery here throughout even the dryest seasons, and the carefully trimmed shade trees lining the principal streets, together with the well-kept gardens which surround all the principal private residences, make Pendleton one of the most attractive cities of the eastern part of the state.



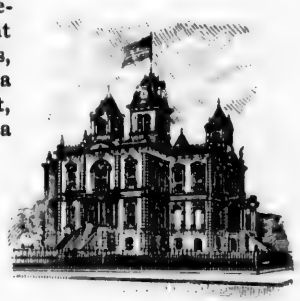
VIEW, MAIN STREET, PENDLETON.

While Pendleton is not surrounded by a wealth of timber and mineral resources, the remarkable productiveness of the soil of Umatilla county, of which it is the seat of justice and the jobbing center and the heavy wool-growing and stock interests of the county, make this one of the richest interior points of the state. Pendleton contains today a population of about 4,000; its streets are wide and well cared for, and the entire city presents an air of activity and prosperity. Fire limits have been established by the municipal government, and within these limits the erection of no wooden buildings is allowed. Handsome one, two and three-story brick and stone blocks line the principal business streets, and new buildings are being constantly erected here. Business pursuits are well represented in the city, and business at this point is generally prosperous.

Few towns in the state enjoy equal opportunities in shipping facilities which the Pendleton merchants are able to avail themselves of. Pendleton is situated on the main line of the Union Pacific, 231 miles east of Portland and 44 miles south of the Columbia river at Umatilla. It is the end of a division of the main line. It is also the terminus of the Spokane and Cœur d'Alene branches of the same system which touch Walla Walla, all the important points of the wonderfully rich Palouse district of Washington, Spokane and all the leading towns of the Cœur d'Alene mineral belt. It is also the terminus of the Oregon & Washington Territory system, which connects with the Northern Pacific at Hunt's Junction, near Wallula, and also with the Union Pacific, and which also extends as far east as Walla Walla and Dayton, opening up the rich farming districts tributary to these latter points. Pendleton thus has direct connection with Portland, which is reached by deep-water vessels, with Seattle and Tacoma, the principal shipping points of Puget Sound, with practically all of Eastern Washington and Northern Idaho, and enjoys competitive freight rates from the East afforded by the two great systems of roads, the Northern and the Union Pacific.

VIEW OF COURT STREET, PENDLETON.

Pendleton is a city containing many modern improvements. It has a fine water-works and electric-light system; it maintains efficient police and fire departments, and the city boasts of a well appointed brick opera house. The Umatilla county court house, at this point, is a model of modern architecture. It was erected at a cost of $90,000, and is one of the finest county court houses on the coast. Pendleton's water supply is obtained from the Umatilla river, which flows along the edge of the city. This is a clear mountain stream, and furnishes, practically, an inexhaustible supply of the purest water for domestic purposes. Power for running a number of Pendleton's leading factories is also obtained from this stream. The manufacturing industries of Pendleton are represented by a large flouring mill, with a daily capacity of 500 barrels, foundry and machine shops, sash and door factory, and planing mill.

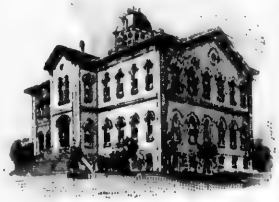


COURT HOUSE, PENDLETON.

The public schools of Pendleton are conducted in a large brick building, which is well arranged for school work. The grades taught range from the primary to the high school course. The public schools here hold terms covering ten months of the year. In addition to the excellent public instruction maintained, the Pendleton Academy provides a course of study which fits students for entering any college, and a Catholic boarding school affords opportunity for private instruction. Both these private educational institutions own their buildings and the grounds on which the buildings are located. The Presbyterian, two Methodist, Baptist, Congregational, Episcopal and Catholic organizations own their church buildings at Pendleton.

The average deposits in the three solid banks of Pendleton do not fall far short

of $100,000. The city supports three newspapers, *The Daily East-Oregonian*, which also publishes a semi-weekly and weekly edition; *The Daily and Weekly Tribune*, and *The Weekly Oregon Herald*. *The East-Oregonian* is published by the East-Oregonian Publishing Company, which is under the management of C. S. Jackson, one of the veteran newspaper men of the state. Mr. Jackson is an able business man and has earned a recognition in the leading centers of the state, and he wields a pen that has excited the admiration of the best critics on the coast. The owner and editor of *The Tribune* is Hon. J. C. Leasure, one of the prominent attorneys and a leading politician of the state. Mr. Leasure is recognized as an able stump-speaker. He has held many prominent positions, including that of mayor of Pendleton, and his abilities have entitled him to the respect of the best people of Oregon. The hotel accommodations of Pendleton are good, the four hotels here ranging from the hostelry of the first-class order to the family house where accommodations are furnished at a moderate cost and where the fare is wholesome if correspondingly plain.



PUBLIC SCHOOL, PENDLETON.

The value of the annual trade of Pendleton is estimated to be about $2,000,000. The gross assessed valuation of city property in 1892 was $1,750,000. The city carries a bonded indebtedness of $70,000. Pendleton is the trading center for practically all of Umatilla county. This county produced in 1892, 1,750,000 pounds of wool and fully two thirds of this was shipped from Pendleton. During the same year the county raised 2,500,000 bushels of wheat, and the principal part of this product passed through the Pendleton warehouses. Pendleton during the past five years has enjoyed a growth that has been surpassed by no inland point of the state and the opportunities for advancement here during the next few years, which will be taken advantage of by a wealthy and progressive class of people, promise even greater things for the city in the future than has accrued to the place in the past.

The present mayor of Pendleton is R. Alexander, whose portrait is published on this page. Mr. Alexander is a native of Hengstfeld, Wurttenburg, Germany. He came to Oregon 22 years ago. Although now but 43 years of age, Mr. Alexander has attained a remarkable degree of success during his business career in Pendleton,

R. ALEXANDER, MAYOR OF PENDLETON.

which began 15 years ago. Pendleton was then but a mere village, but Mr. Alexander appreciated the natural advantages in location which the small town enjoyed and he foresaw the Pendleton of today. Embarking in the general merchandise business, Mr. Alexander easily kept pace with the rapid growth of the town, and he is today the senior partner in the large general merchandise concern of Alexander & Hexter who carry a line of goods valued at $50,000. Besides being mayor, Mr. Alexander is a prominent member of several fraternal organizations, among which are the Odd Fellows, Masons and Knights of Pythias. Of the first mentioned order Mr. Alexander has been grand master of the state, grand patriarch and grand representative, having held the last office for two terms of two years each. Mr. Alexander enjoys the distinction of being the only 32d degree Mason in Pendleton. He has been master of the local lodge for two years. Mr. Alexander has been vice-president of the Pendleton Savings Bank, and he has been foremost in many of the public enterprises which have resulted in making Pendleton one of the most prominent cities in Eastern Oregon.

One of the most prominent business institutions of Pendleton is the Pendleton Savings Bank, which was organized in 1889 with a paid-up capital of $100,000. The present officers are W. F. Matlock, president; W. M. Pierce, vice-president and R. T. Cox, late of the First National Bank of Portland, cashier. The Pendleton Savings Bank has achieved a most gratifying success to its shareholders since its organization, as shown by the statement that its undivided profits now amount to $20,000 and its paid dividends to $50,000. This success is, of course, due to the business sagacity of the bank's officers, to the financial strength and standing of its stockholders, prominent among whom are Henry Failing, D. P. Thompson, L. L. McArthur and C. H. Lewis of Portland, A. Bush of Salem, Levi Ankeny of Walla Walla and C. E. Tilton of New York.

THE PENDLETON SAVINGS BANK, PENDLETON.

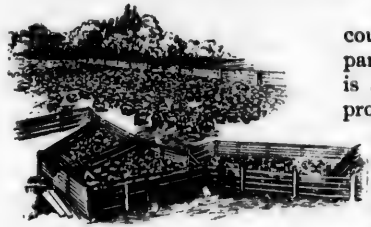
The Pendleton Savings Bank is looked upon as one of the permanent institutions of the city. It has already manifested its confidence in Pendleton by erecting, at a cost of $33,000, the handsome brick building, an illustration of which is published in connection with the present article.

GOLDEN RULE HOTEL, PENDLETON.

The Golden Rule Hotel at Pendleton enjoys the reputation of being one of the best conducted hostelries in Eastern Oregon. It is conveniently located both with reference to the business portion of the city and the union depot, where all in-coming and out-going trains are met by the Golden Rule's free omnibus. The house itself is a three-story brick, fire-proof and lighted by electricity. The accommodations are strictly first-class. The appointments are modern in every respect. Arthur Hammond, the proprietor, having been in the railroad business for 22 years, has a

full appreciation of the needs and comfort of his guests and he spares no pains to provide for their every want. The Golden Rule Hotel is to be commended to the traveling public.

Umatilla County, Oregon.—Umatilla county is situated in the extreme northeastern portion of the state of Oregon. Its northern boundary is the state line at the Columbia river; it is bounded on the east by Union county; it extends to Grant on the south, and on the west it reaches to Morrow county. The approximate area of the county is 2,073,000 acres.



SCENE, SHEEP RANCH, UMATILLA COUNTY.

The eastern and southern portions of Umatilla county are somewhat mountainous. The northern part of the county bordering on the Columbia river is a strip of sandy land which can be made highly productive by irrigation. The vast agricultural belt which lies between the rugged foothill districts and the sandy strip above referred to comprises an area of about 1,500,000 acres. This land constitutes one of the richest sections of the great "Inland Empire," and much of this land is now in a high state of cultivation. The higher elevations of the county are covered principally with a heavy growth of fine timber, and the lumber and shingle interests of this part of the state are already large. The rugged foothill districts furnish fine grazing lands for stock, and much of this land when cleared is especially adapted to growing the finest quality of timothy.

The surface of the land of Umatilla county does not present an attractive appearance to the stranger who is not familiar with the qualities of the soil of this land. If seen when no rain has fallen here for several weeks, the surface of the ground presents a dry, even parched, appearance not at all conducive to successful grain growing. Yet this same land produces regularly yields of from 25 to 40 bushels of wheat to the acre. The explanation of this wonderful fertility of the soil of Umatilla county is its capacity to retain moisture. This land, which presents a dry appearance to the eye, is always moist a few inches below the surface during even the longest protracted period of drought.

The principal water-courses of Umatilla county are the Umatilla and Walla Walla rivers and the Wild Horse, Birch, Butter and other creeks. These streams afford an ample flow of water for domestic and irrigation purposes, and they also furnish at convenient points power for manufacturing purposes.

GRAIN FIELD, UMATILLA COUNTY.

Stock raising, wool growing and farming are the leading industries of Umatilla county. During the early settlement of the county great attention was paid to stock raising and wool growing, owing to the unexcelled opportunities afforded here for grazing. A greater portion of the best lands of the county were at that time covered with a heavy growth of the finest bunch grass, on which cattle and sheep kept fat throughout the year. Since it was discovered that the finest bunch-grass lands of the county were capable of producing large yields of wheat, the area of the former grazing

grounds has been greatly restricted, and the stock-raising interests of the county have consequently declined of late years. Umatilla county is now one of the greatest grain-producing sections of the state. Since 1885 the amount of wheat annually exported from this county has averaged from 2,000,000 to 3,500,000 bushels. In addition to wheat growing, certain portions of the county are well adapted to fruit culture. In the Milton valley district, in the northeastern part of the county, are some of the finest orchards of the state, and the fruit interests of the county are constantly increasing.

Second in importance to the raising of grain in Umatilla county is the wool industry. The average crop of wool in the county is from 1,500,000 to 2,000,000 pounds. The value of this wool crop and of sheep is from $400,000 to $500,000 a year. A definite idea of the extent the wool industry assumes in this part of the state can be obtained from a careful perusal of the article descriptive of Mr. Charles Cunningham and his sheep ranch, one of the largest and best conducted on the coast, which is published in connection with the present article.

In certain parts of Umatilla county the conditions are favorable for dairying, and a number of persons are now engaged in this industry here on a large scale. The mineral resources of the county have not as yet been developed to any extent, although some valuable discoveries of ore have been made in the extreme southeastern portion of the county. Deposits of coal have been found in the southern part of the county.

In 1891 about 400,000 acres of land were added to the taxable property of Umatilla county by throwing open to settlement the Northern Pacific R. R. Co's forfeited lands and also the lands of the Umatilla Indian reservation. Much of this land, including some very desirable tracts, is still unoccupied. A large part of the Umatilla Indian reservation tract that was offered for sale at auction in 1891 found no bidders, and it is expected that these lands will be again offered for sale in the near future.

The present population of Umatilla county is about 14,000. The total value of all property in the county subject to taxation in 1891 was $10,768,342. This is one of the best settled and most inviting sections of Eastern Oregon, and it is probable that the population and wealth of the county will increase as rapidly in the near future as has been noted here during the past few years.

The Great Sheep King, Charles Cunningham, whose portrait appears on this page, is the largest individual sheep owner of Umatilla county, and considering the size of his herds and the blooded animals in his flocks, he may be fairly said to be the leading representative of the sheep industry in Eastern Oregon.

A brief sketch of the life of Oregon's sheep king will undoubtedly prove of interest to those who are personally acquainted with this gentleman, or who know him by repute only. Born in County Galway, Ireland, in 1846, Mr. Cunningham emigrated to this country at the age of 18. Almost immediately upon his arrival here he proffered his services to the United States navy. He was assigned to the battleship Galena, and received his first baptism of fire at the famous battle of Mobile Bay. At the conclusion of the war he emigrated to California, and after a brief residence in Alameda county, he removed to Oregon and located in Umatilla county in 1869. In the latter year he embarked in the sheep business, a business that was destined to bring him both wealth and the proud distinction of being a successful and generous man of the world.

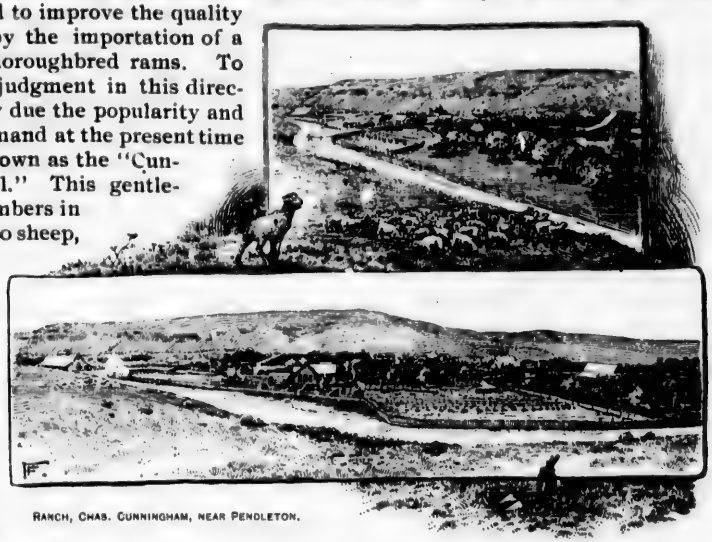
His apprenticeship in the sheep business was served in the employ of Major W. H. Barnhart, then one of the leading wool-growers of Eastern Oregon. No better opportunity for studying the cares and duties of the management of sheep could have afforded itself to the young seeker for fame and fortune in the West than the time Mr. Cunningham spent in the employ of Mr. Barnhart. Even while honestly helping to enrich another he fully made up his mind that in the near future a good part of his honest efforts should be devoted to enriching himself. Being a thrifty lad he saved his money, and in 1873, in association with Jacob Frazer, known to all residents of Pendleton as "Uncle Jake," he was able to purchase a respectable flock of sheep of his own. The business of Messrs. Frazer & Cunningham was a prosperous one from the start, and these gentlemen were soon able to purchase the Webb slough ranch, since better known as the Hewlet & McDonald ranch. This new purchase afforded additional and excellent browsing ground for their flocks, and the increase in the wealth and importance of the firm was both rapid and of a substantial nature. The partnership lasted between these two gentlemen until their flocks had increased to such a size that they felt that they had a sufficient number of sheep to look after for each partner to engage in business on his individual account. The firm then dissolved partnership by mutual consent, and each in the future devoted his attention to the care of his individual flocks.

CHAS. CUNNINGHAM, PENDLETON, SHEEP KING OF EASTERN OREGON.

In 1877 Mr. Cunningham purchased what is now known as the Cunningham ranch, located on Buffalo creek. At the time the gentleman purchased this place it was in Umatilla county, but by a subdivision of the county it is now in Morrow county. One year after this time Mr. Cunningham married Miss Sarah Doherty, a niece of E. B. Nelson, who was massacred by the Indians in the outbreak of 1878. This union, though a happy one, was of brief duration, for Mrs. Cunningham died two years after her marriage, leaving behind her a daughter, in whom the hopes of the father are centered today.

In the early days of the sheep industry in Eastern Oregon the more common grades of sheep were raised, to the exclusion of what were then known as "fancy breeds." This naturally resulted in a wool crop of a quality greatly inferior to the

crop of today. Mr. Cunningham was among the first to perceive the advantage to be derived from raising the standard of his breed of sheep. Following out this line, he aimed to improve the quality of his flock by the importation of a number of thoroughbred rams. To his excellent judgment in this direction is largely due the popularity and increasing demand at the present time for what is known as the "Cunningham wool." This gentleman now numbers in his flock 20,000 sheep, 4,000 of which are thoroughbreds. Outside of the thoroughbreds, the rest of his sheep are graded, and of fine quality. Steady progress has been his constant motto through life, and he has never allowed any opportunity for advancement to pass by unimproved.



RANCH, CHAS. CUNNINGHAM, NEAR PENDLETON.

When the famous blooded stock owned by William Ross, a noted sheep-herder came into the market, Mr. Cunningham took advantage of the opportunity to purchase the entire band. These sheep were from the noted Hammond stock of Vermont, and they never fail to inspire confidence and admiration in the breasts of practical sheep men who regularly visit the ranch of Mr. Cunningham. The fleece of these animals is long, white and of the staple quality for which there is such an eager and steady demand. The Hammond bucks have established their reputation as "leaders," and they are eagerly sought by sheep men whose knowledge of sheep-breeding is abreast of the times. Those who have bred to the Hammond bucks owned by Mr. Cunningham, have not only increased the weight of the fleece on their own sheep, but they have also added to the size of the sheep themselves. It has been clearly demonstrated that a large fleece of actual wool depends upon the quantity of wool raised to the square inch of surface on the sheep's back. To produce the maximum quantity of wool, it must be long, dense and equally distributed over the body of the sheep. All of these conditions are fulfilled in the Hammond breed, hence their value as wool producers is conceded. It is a well-known and undisputed fact that all stockmen who have made or are making their fortunes in sheep raising, are those who have bred to first-class bucks, and thus improved their stock, and who have also improved their wool clip as a result of raising the standard of their bred sheep. That the energy and good judgment which Mr. Cunningham has availed himself of in the sheep industry are fully appreciated, is attested by the fact that this gentleman is now in constant receipt of

orders for rams from Oregon, Washington and Idaho, and even from distant California.

The rearing and caring of sheep is also a very important factor in the sheep industry. A thoroughbred animal is no more exempt from "scab" and other sheep disorders than his plebian brother of meaner extraction. In this direction Mr. Cunningham has also shown himself an expert in his business. By painstaking efforts he has succeeded in keeping his flock free from all the disorders to which the sheep is subject, and his entire ranch is today a model of cleanliness and good order. This has been brought about by the closest attention to the particular line of business to which Mr. Cunningham has devoted his best energies in life. As before stated, he is looked upon today as an expert and authority in sheep-raising, and as such is frequently consulted, not only by new men embarking in the sheep business, but also by many stockmen of experience who run across knotty points they are incapable of solving.

When it is considered that the subject of this sketch came to this country as a raw Irish lad, entirely without means, and that he has, by strict application and hard work, placed himself among the wealthiest and most respected citizens of his section, the native ability and energy of the man can be better appreciated and admired. Some of the surroundings of Mr. Cunningham's home life may be gathered from the illustrations of his ranch published on this page. The larger illustration is a view of his ranch showing a few of his celebrated Hammond sheep browsing in the distance, a breed of which he is so justly proud. To gain anything of an accurate knowledge of the immense industry presided over by Mr. Cunningham, and the care and responsibility involved in the management of 20,000 sheep, one should pay a visit to the home of the Oregon sheep king. Mr. Cunningham is a most affable gentleman. He is unaffected and quite unspoiled by his great good fortune, and he always takes particular delight in making visitors to his ranch feel perfectly at home. Those who may be unable to pay a personal visit to the ranch of Mr. Cunningham, but who may desire accurate information on the subject of discriminating in making a choice of different breeds of sheep, can always obtain the desired information by addressing Charles Cunningham, at Pilot Rock, or at the Pendleton Savings Bank, Pendleton, Oregon.

Athena, Oregon.—Athena is a prosperous town of Umatilla county, having a population of about 700. It is situated on the Washington division of the Union Pacific Railroad, 19 miles north of Pendleton, the county seat, and 250 miles east of Portland. A spur of the Oregon & Washington Territory railroad also extends from Helix to Athena, a distance of seven miles. The town is surrounded by a magnificent wheat-growing section and today it is the largest wheat-shipping point in proportion to population, in Eastern Oregon. The shipments of wheat annually made from this point, with the heavy wool and stock interests of the tributary country, make Athena a thriving point which does a constantly increasing business with each successive year.

In addition to the usual business interests found in a town of this size, Athena supports a bank and two weekly newspapers, *The Press* and *The Inland Republican*. The public schools are conducted in a commodious brick building. Four teachers are employed in the schools and the average daily attendance of scholars is about 175. The Catholics, Baptists, Methodists and Christian denominations occupy church buildings of their own here. The place also contains a good hotel and two well

stocked livery stables. Athena's growth during the past few years has been rapid and the prospects for a continued growth at this point are encouraging.

Weston, Oregon.—Weston occupies an attractive location on the Washington division of the Union Pacific railroad, 21 miles north of Pendleton and 252 miles east of Portland. The extension of the Helix branch of the Oregon & Washington Territory railroad from Athena to Weston during the present year is practically assured. In addition to the local consumption of 30,000 bushels of wheat in 1892, there were shipped from this point during the same year 200,000 bushels of wheat, and 28 tons of hay. During 1893 it was estimated that the shipments of wheat alone from Weston before the close of the year would reach 300,000 bushels.

PUBLIC SCHOOL, WESTON.

A roller-process flouring mill with a capacity of 75 barrels a day is located at Weston. The town also contains a brick and tile factory which manufactures 30,000 brick a day. This latter enterprise employs 30 men and disburses on an average, at this point, $100 a day. The output of this plant finds a market in the towns of Umatilla county and in the points not too distant, located in Oregon and Washington.

The last session of the Oregon legislature made an appropriation of $24,000 to be applied to the construction of a state normal school building at Weston. The building for this school is now in course of erection. It is modeled after the most approved designs in architecture and will be a handsome and perfectly arranged structure. The public school building at Weston is a large two-story brick edifice which was erected at a cost of $12,000. Four well qualified teachers are employed in the school, which is divided into as many grades. The average daily attendance at the public school is about 200.

The municipal authorities of Weston recently bonded the town for $24,000, to be used in the construction of city waterworks and an electric-light plant. These plants are now in operation and are doing good service. The water for the city is obtained from three never-failing springs located on an eminence in the vicinity. The pressure in the city mains insures an ample protection against fire. All lines of business are well represented at Weston. The Farmers' Bank has recently increased its capital stock to $60,000 and it pays a handsome dividend annually to its stockholders. A local building and loan association, having a capital of $50,000, is well patronized. The religious denominations having churches at Weston are the Episcopal, Methodist, Baptist and United Brethren. The town supports one ably edited weekly paper, *The Leader*. It has one first-class hotel and two livery stables. Its present population is about 800, and having every advantage of location is enjoying as great a degree of prosperity as are any of the inland cities of the state.

THEO. T. DAVIS.—The present mayor of Weston, Theo. T. Davis, is a striking type of the self-made man. Born in Jefferson county, Ill., in 1860, young Davis attended the common school at Mt. Vernon until he reached the age of 15, when he engaged in the mercantile business as salesman. Continuing in this occupation till 1884, Mr. Davis then removed to Umatilla county, Oregon, where he soon rose in popular esteem and was elected mayor of Weston in 1891. During the same year Mr. Davis was also made manager and cashier of the Farmers' Bank of Weston, which at the end of the first year of his management declared a dividend, and at the end of

the second year the capital stock, $60,000, was doubled and Mr. Davis was elected a member of the board of directors.

JOHN CUMMING.—The largest general merchandise store in Weston and one of the largest in Umatilla county is that of Mr. John Cumming, who carries a complete stock of goods valued at more than $20,000. Mr. Cumming recently came to Weston from Goldendale, Washington, where he held for two years the office of treasurer of Klickitat county. Mr. Cumming has had 20 years' experience in the general merchandise business, and he is rapidly building up a large trade in his new quarters at Weston.

Milton, Oregon.—Milton, in Umatilla county, Oregon, is a picturesque little town on the line of the Washington division of the Union Pacific railroad. It is 267 miles east of Portland and is 10 miles west of Walla Walla. The business of the town is done on one long, wide street. This street is well shaded and it forms one of the most attractive main thoroughfares of any of the Eastern Oregon towns.

Running parallel with the main street of Milton, and at an average distance of about 1,000 feet apart, is the Walla Walla river, one of the large streams of this section. The river has a fall at this point which insures power for manufacturing purposes. This power is now utilized for running two flouring mills and a foundry, which constitute the manufacturing industries of the place.

Milton is not a large business center, but the trade of the town is in a healthy channel. In addition to a number of stores, the place supports one bank, two hotels and a livery stable. A weekly newspaper, *The Eagle*, is published at this point. The public school occupies a six-room building and is in charge of four teachers. The religious denominations represented at Milton are the Methodists, Baptists and Seventh Day Adventists.

The country surrounding Milton is highly productive, the chief products being grain and fruit. The strawberries raised here are unexcelled in either quality or size. During the past season a carload of strawberries was shipped each day from Milton. These shipments having been made as far east as Helena and Butte, Montana. Milton has always been a flourishing little center of trade, and, as before stated, the business handled at this point is all on a perfectly healthy basis.

La Grande, Oregon.—La Grande, although not the county seat, is the largest town in Union county. Its present population is about 3,500. It is situated on the west side of the Grand Ronde valley, and it is the principal supply point for a section of country whose area is estimated to be 500 square miles. The trade of this district includes everything that a marvelously fertile soil, favored by an equable climate, will produce. Chief among the productions of the territory tributary to La Grande are grain, hay, hops, fruit and vegetables, as well as wool, hides, cattle, sheep and horses, and lumber. Within a radius of 20 miles of La Grande there are no less than 25 sawmills, whose output during the cutting season is from 10,000 to 100,000 feet each per day.

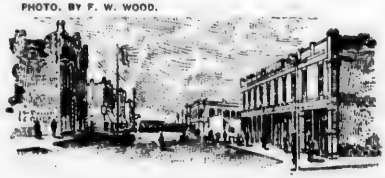


PHOTO. BY F. W. WOOD.

DEPOT STREET, LA GRANDE, LOOKING NORTH.

La Grande is the end of a division of the Union Pacific railroad, and is 305 miles

east of Portland by this line. A branch of the Union Pacific extends out from La Grande to Elgin, in Indian valley, a distance of 22 miles. The Union Pacific has established repair shops, round houses, coal bunkers, etc., at La Grande, at a cost of about $100,000. About 200 men are regularly employed in the company's shops at this point and the monthly pay-roll averages about $25,000.

La Grande is fully abreast of the times in all modern improvements. The main streets of the city are 100 feet wide and they are well macadamized with gravel. The city contains 30 brick business blocks made attractive by gracefully designed fronts. A water-works plant, built by the city at a cost of $70,000, and a well equipped fire department, are recent additions to the city's improvements. The water supply of the city is forced from a series of wells near the Grand Ronde river to a reservoir near the city, with a capacity of 1,500,000 gallons. The streets, business houses and best private residences of the city are thoroughly lighted by electricity. The efficient electric light plant was recently completed here at a cost of $37,000.

PHOTO. BY F. W. WOOD.

ADAMS AVENUE, LA GRANDE, LOOKING EAST.

LaGrande contains one roller-process flouring mill with a daily capacity of 100 barrels, three planing-mills and a number of smaller manufacturing enterprises. The Grand Ronde river furnishes during nearly the entire year 150 horse power available for manufacturing purposes here, but this power is not being utilized at the present time.

The various mercantile pursuits at LaGrande are conducted by an enterprising class of business men. Two national banks, with a capital stock of $60,000 each, are located at this point. The city also supports three weekly newspapers, *The La Grande Gazette*, *The Grand Ronde Chronicle* and *The Union County Farmer*. La Grande contains a neat little opera house and two brick hotels, one of which, The Foley House, was recently erected at a cost of $30,000. This hotel is strictly modern in all its appointments and is heated throughout by steam and lighted by electricity. In addition to the above, there are also two smaller hotels conducted in the place.

The public schools of LaGrande are conducted in a large handsome building of six rooms and in two wooden buildings of four rooms each. The main school building was erected at a cost of $12,000. A principal and a staff of 11 assistant teachers are employed in the public schools here. The courses of study taught range from the primary to the high school. The average daily attendance of scholars at the public schools of the city is about 625. The Presbyterian, Methodist, Baptist, Episcopal and Catholic organizations own their own church buildings at LaGrande. The gross assessed valuation of taxable property in LaGrande for 1892 was $1,500,000 and the total bonded indebtedness of the city at the present time is $50,000.

During the past three years LaGrande has made very substantial progress. In 1889, 35 new private residences were erected here; the following year 152 new residences were completed. In 1891, 183 private dwellings were added, and in 1892 this was still further increased by the erection of 100 more. LaGrande is the trading center of a rich section of country and its growth during the past few years has been no more rapid than it is expected it will be in the immediate future.

LaGrande boasts of having one of the finest hotels in the state outside of Portland. The Hotel Foley at this point, an illustration of which appears in connection with the present article, is a handsome three-story brick structure, occupying one of the most prominent corners in LaGrande. The house is heated throughout with steam and it contains 50 elegantly-furnished rooms, all of which are lighted by electricity. Free sample-rooms are provided for the convenience of commercial travelers. The Hotel Foley was erected in 1891 at a cost of $30,000 by the present proprietor, J. E. Foley. Mr. Foley is an experienced hotel manager and has earned a patronage for his excellent hostelry such as is won only by first-class accommodations and thoroughly courteous treatment of guests. The rates at the Hotel Foley are from $2 to $2.50 per day.

HOTEL FOLEY, LA GRANDE.

Since the above was written the city of LaGrande has signed a contract with the LaGrande Electric Light Company for lighting the city by electric lamps. Twenty 1,200-candle power arc lights will be used for this purpose.

Elgin, Oregon.—Elgin, in Union county, is the present terminus of the Elgin branch of the Union Pacific railroad, which leaves the main line at La Grande, 20 miles south of Elgin. The town is situated in Indian valley, an arm of the Grand Ronde valley, and one of the most fertile spots in Eastern Oregon. This valley is about 16 miles long by eight miles wide. The principal shipments from Elgin comprise wheat, lumber and live stock. The town is the result of but three years' growth and it contains today a population of about 300.

Within a radius of four miles of Elgin are located four sawmills which are kept busy manufacturing lumber and railroad ties for the Union Pacific. These mills give a constant employment to a large number of men and add materially to the wealth of Elgin. Located at this point are the usual number of stores found in small towns and business here is generally good. The town has two hotels, two livery stables and a weekly paper, *The Elgin Record*. Three teachers are employed in the public schools at Elgin and the average daily attendance of scholars is about 100. The Baptist and Methodist organizations own church buildings at this point. The completion of the branch of the Union Pacific to Elgin in 1889 made the town and greatly aided the development of the tributary district, and it is this road which will greatly add to the material advancement of this part of the state in the future.

Union, Oregon.—Union is the judicial seat of one of the richest counties in mineral and agricultural resources in Eastern Oregon. It is situated near the center of Union county, at the southern extremity of the rich Grand Ronde valley, and on Catharine creek, which furnishes at this point valuable water power for manufacturing purposes. Union is on the line of the Union Pacific railroad, 318 miles east of Portland. The town has a population of about 800 and is a prosperous business community.

PUBLIC SCHOOL, UNION.

Prominent among the notable buildings of Union are the court house, city hall, and public school. All of these are fine brick structures. The public school building was erected at a cost of $20,000 and it is one of the best arranged buildings for school work in the state. The schools here are graded from the primary to the high school course, and they are taught by five teachers. The city has a fine gravity system of water works, recently completed at a cost of $20,000. The water for city use is taken from a point on Catherine creek, a pure mountain stream, two miles from the city, and from this point it is conducted through a 10-inch main under a vertical pressure of 110 feet to the city. The city thus avoids all expense for pumping. The city has its own water for municipal purposes furnished free and it derives a good rental for the use of private pipe lines. Union has expended $2,000 in the purchase of fire apparatus, and a well drilled and equipped volunteer fire department is maintained here. The place also enjoys all the benefits of an efficient electric light plant, the system covering both the streets, the private residences and the stores.

All business in Union is in a prosperous condition. In addition to several large general merchandise stores, the town supports one strong national bank and a number of manufacturing enterprises, including a roller-process flouring mill, a planing mill and a sawmill. *The Union Republican*, a representative journal, and *The Oregon Scout*, two well edited weekly newspapers, are published here. Handsome church edifices are owned at Union by the Presbyterians, Methodists and Episcopalians. The Baptists also have an organization at this point, but they have no church building of their own. The traveling public is cared for by one good hotel and two livery stables.

UNION COUNTY COURT HOUSE, UNION

Union is the center of a considerable trade. Daily stages connect this point with Medical Springs, Sanger and Cornucopia. The Union Railway Company's motor line connects the town with the main line of the Union Pacific, whose depot is two miles distant. Negotiations are now pending which have in view the extension of this short line of road to the heavy timber belt a few miles east of Union. The principal shipments from Union are live stock, wool, hay, grain and lumber.

In another article on the mineral productions and agricultural resources of Union county, will be found valuable information on the wealth of this part of the state, which is the mainstay of Union's prosperity and which insures this point the prosperity which it has always enjoyed.

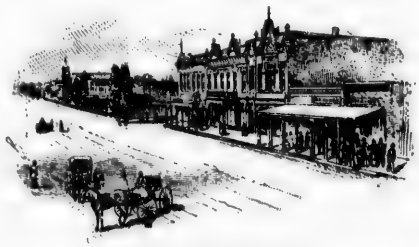
Union County, Oregon.—Union county is situated east of Umatilla. A small part of the northern boundary touches the state of Washington. The county reaches south along the eastern boundary of Umatilla, it touches the northern boundary of Baker on the south and reaches the boundary line of the state of Idaho on the east. Wallowa county was carved out of the extreme northeastern part of Union in 1887. The Union Pacific railroad runs through Union county in a northwestern and southeastern direction, and taps the most fertile lands of this part of the state.

Union county contains 1,955,000 acres of land of which about 1,497,000 acres are surveyed. The unsurveyed portion of the country is principally mountainous, but is valuable for its timber resources, for its minerals and for grazing purposes. The largest single body of agricultural land in the county is the Grand Ronde valley. This valley contains 300,000 acres of highly productive land. The Grand Ronde

river flows through this valley from southwest to northeast. The soil here is adapted to the cultivation of grain, hay, hops, fruit and vegetables. All these products of the soil, in addition to flour, bacon, wool, hides, horses, cattle, sheep and lumber are shipped in large quantities from the valley. The other smaller valleys, the soils of which are of the same high quality as that of the Grand Ronde valley, are Pine, Eagle, Powder River, Clover Creek, Starkey Prairie and Indian.

The rainfall in Union county is sufficient to insure large crops each season, so that irrigation here is unnecessary. The climate is equable, the winters being dryer and colder than they are in the western part of the state. The soil here is generally of an alluvial nature and a sandy loam from 3 to 20 feet in depth. The average yield of wheat to the acre in the county runs from 20 to 60 bushels to the acre, oats 40 to 80, and barley produces 40 to 90 bushels to the acre. The stock interests in the county have always been large, and the mild winters, extensive ranges and abundance of water combine to make this a favorite part of the state for stockmen. The prices of land in Union county range from $10 an acre and upwards for improved valley lands, and unimproved land sells for from $6 an acre up. There is room in the county for a much larger population than now resides here, and this with other parts of Eastern Oregon is worthy the attention of the large immigration now pouring into the West.

Baker City, Oregon.—Baker City is the seat of Baker county, is situated at the head of Powder River valley, on the stream of the same name. Baker City is also on the main line of the Union Pacific railroad, 357 miles east of Portland, and it is today one of the leading centers of population and wealth in Eastern Oregon. The present population of Baker City is about 3,000. The city is well laid out, the streets being wide and well kept, the principal buildings used for business purposes are handsome brick and stone structures, and a number of the private residences of the city will compare very favorably with some of the elegant residences of Portland.



FRONT STREET, BAKER CITY.

Powder River valley, in which Baker City is located, is about 25 miles long by 12 miles in width. It is well watered by the Powder river and its tributaries, and is highly fertile. The Powder river furnishes a large available water power at Baker City, which has not been utilized to any extent up to the present time. Baker City's manufacturing enterprises, at the present writing, are limited to an iron foundry and three planing mills. Within two miles of the city, however, are the mills of the Oregon Lumber Company, which have a daily capacity of from 50,000 to 75,000 feet of lumber. Another sawmill in the district immediately tributary to Baker City saws about 25,000 feet of lumber a day. Timber is one of the valuable products of Baker county, and the supply of fine merchantable timber here is practicably inexhaustible. A short line of railroad, 25 miles in length, now runs out from Baker City into the great Blue Mountain timber belt, in the Sumpter valley district. The mountain terminus of the road is at McCune, which is a logging camp of considerable importance. This road does a large and constantly increasing

business, and its construction has done much to develop the fine timber belt immediately tributary to Baker City.

The climate of this part of the state is exceedingly healthful, the excessive moisture of the western part of the state being altogether avoided here. Baker City has one of the best public school systems of the state. The public schools here are conducted in a large brick building, and are taught by a force of 12 teachers. The courses of study run from the primary to the high school. The average daily attendance of scholars is about 500. In addition to the public schools, a Catholic institution of learning provides an academic course of study. The Presbyterian, Methodist, Baptist, Episcopal and Catholic organizations own church buildings at Baker City.

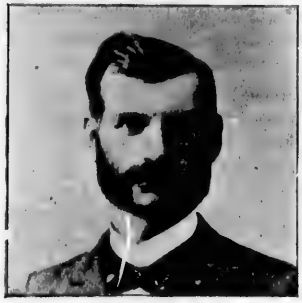
PHOTO. BY HAZELTINE.

PUBLIC SCHOOL, BAKER CITY.

The water supply of Baker City is obtained from artesian wells. A large reservoir occupies an eminence sufficiently high to afford a pressure that will throw a stream of water from the city's mains a distance of 180 feet. The water-works plant was completed at a cost of $80,000, and it is unnecessary to state that it is more than ample to meet the demands of the city for water for many years in the future. The city is afforded every protection against fire in a well drilled fire department. In addition to the efficient water-works plant, Baker City boasts of a fine electric light plant, gas works, a street line of railway, a fine brick court house, and an opera house with a seating capacity of 800. A good race track is maintained in connection with the county fair grounds, on the outskirts of the city, and the gatherings here yearly are largely attended.

The Baker City Democrat, run by Messrs. Bowen & Small, is an ably edited daily and weekly newspaper. In addition to *The Democrat*, *The Weekly Oregon Blade* is also published at Baker City. The city contains two large hotels and a number of well-stocked livery stables. The mining, stock-raising and lumbering interests of the country tributary to Baker City are heavy, and constitute a large part of the revenues which regularly flow to this point. The business men of the city are wide-awake, and it is to the efforts of these men that Baker City's prosperity has been chiefly due. Tributary to the city are also some of the finest mines on the coast. During 1892 the output of the mines tributary to this point amounted to $300,000. During the same year the two banks of Baker City handled about $400,000 in gold taken out of this mineral belt, but a part of this gold was from the rich placer mines of this district. New and valuable discoveries of gold are constantly being made in this section, and an increased amount of development work is done with each successive year. The mines now tributary to Baker City promise to continue to be a great source of revenue to the city, and the development of these mining properties will do much to encourage the growth and prosperity of all Eastern Oregon.

At the head of the municipal government of Baker City is Mayor C. A. Johns, who is also a prominent attorney of the latter place. Mr. Johns is a graduate of the Willamette University, which institution conferred on him the degree of A. M. At the age of 21 Mr. Johns held the office of deputy sheriff of Marion county. Later he moved to Polk county, where he was appointed to the office of county judge. Six years ago Mr. Johns was attracted by the rapid growth and development of Eastern Oregon and located in Baker City. From the fact that Johns & Rand are now con-



C. A. JOHNS, BAKER CITY.

sidered one of the most successful law firms in Eastern Oregon, it is but natural that Mr. Johns should have unlimited confidence in the future prosperity of Baker City, which is the most central point of supply for a vast mining and agricultural district.

The First National Bank of Baker City was organized in 1893, with a capital of $75,000. Its officers are Levi Ankeny, president; Walter Fernald, vice-president; J. H. Parker, cashier, and T. W. Downing, assistant cashier. The business success of the First National Bank has been somewhat remarkable, as is shown by the fact that its present surplus and undivided profits reach the handsome sum of $111,000. During the past year this bank handled more than $225,000 in gold obtained from the Elkhorn, Bonanza, Virtue and other quartz mines and placer mines, which are directly tributary to Baker City.

One of the most imposing structures in Eastern Oregon is the large three-story brick Hotel Warshauer, erected at a cost of $70,000 and located at Baker City. Louis F. Cook is the successful proprietor of this fine hotel. The house contains 80 rooms elegantly fitted up, several of which are arranged in suites, and all are provided with electric lights. Mr. Cook is a hotel man of long experience and he has succeeded in making the Hotel Warshauer one of the most popular caravansaries in Eastern Oregon. Commercial travelers and mining men make the Hotel Warshauer their headquarters while doing business either in Baker City or in the neighboring towns. The Hotel Warshauer is strictly modern in each of its appointments, and the courtesies and attention shown its many patrons make the hotel a source of much pride to Baker City.

HOTEL WARSHAUER, BAKER CITY.

The recent mining developments in the country tributary to Baker City are attracting such wide-spread attention that the Eastern Oregon Mining Bureau has been formed at Baker City. Mr. James F. Ferguson is secretary of this organization and is prepared to furnish information regarding the mines of Eastern Oregon. Mr. Ferguson is also a mining and real estate broker and, having lived in Baker City for more than 24 years, is thoroughly posted on mining and realty values.

Baker County, Oregon.—Baker county is situated on the eastern border of the state. It comprises an area of 1,300,000 acres. The present population of the county is about 7,000. Union county bounds Baker on the north; the state of Idaho is the dividing line on the east; it is bounded by Malheur on the south, and by Grant county on the west. It is watered by two important streams, Powder and Burnt rivers. The county is crossed diagonally by the Union Pacific railroad which furnishes an available outlet for the products of the county both east and west.

The climate of Baker county is healthful and the soil is adapted to the growth of almost everything common to the temperate zone. The Powder River valley occupies the central portion of the county and is the most important agricultural district of the county. This valley covers an area 25 x 12 miles, and the attention of the settlers here is directed principally to agricultural pursuits and stock raising. The general elevation of the county is probably greater than that of any other portion of the state. In the valleys of the county wheat, vegetables and fruit are raised in considerable quantities. The agricultural products of the county are increasing with its population, and the possibilities for agricultural development in the county are great. The raising of cattle, sheep and high-bred horses is carried on in the county to a large extent, and the climate seems to be especially adapted to successful cattle raising. Instances are on record where cattle have grazed in some of the valleys of the county for 15 years past without other sources of food supply than are afforded on the grazing grounds. The timber resources of Baker county are very valuable, and a number of sawmills are busily engaged in manufacturing lumber here for both the Eastern and Western markets, as well as supplying the local demand. The mineral resources of the county are sufficiently important to call for a special article on the mines of this part of the state, which will be found following this article.

The lands of certain portions of Baker county are valuable for agricultural purposes only when irrigated, but where water can be brought to these lands they are among the most productive in the state. One or two irrigating companies have been formed during the past year whose object is to perfect a system of irrigation that will reclaim much of this arid section. Baker is a rich and prosperous county, the total assessed valuation of property in the county, during 1891, having been $3,198,157. The development of the rich mines of the county has attracted considerable attention to this part of the state during the past few years, and it is highly probable that Baker county will make steady and substantial development in population and wealth for many years in the future.

Mines and Mining in Union and Baker Counties, Oregon.—The following statistics showing the gold and silver output of the mines of Union county during 1892 are compiled from the report of the director of the mint for that year. It is significant in this connection that Union county is one of the most promising mineral-producing counties of the state. The output of Union county in 1892 was as follows: gold, $753,715; silver, $1,900, a total of $755,615. The output of gold and silver in the county the previous year was as follows: gold, $625,956; silver, $3,500, or a total of $629,456. A large part of the gold and silver produced in the county during 1892 was taken out of the mines in the vicinity of Sparta.

During 1892 the following were the heaviest producing mines of the county: Cornucopia, $20,900; Little Pittsburg, $45,000; Windsor, $25,000; Union Tunnel Company, $22,500; Gold Ridge Company, $35,000; Free Thinker, $25,000, Arkansas Belle, $30,000; Dolly Varden, $45,000; New Gem, $20,000; Sanger Group, $275,000; Golden Eagle, $20,000; Placers and Chinese, $85,000.

Baker and Union counties form the largest mineral-producing section of Oregon. During 1891 the output of 48 mines and mining localities was as follows: Gold, $873,058; silver, $217,833 or a total of $1,090,891. The report to the directors of the mint for 1892 stated that all efforts to get satisfactory replies to letters addressed to 22 mining companies in here had failed. Thirty-seven mines and

mining localities in Baker county for 1892 made the following showing: gold, $367,587; silver, $3,256 or a total of $370,843. This showed a decrease in the output over that of the previous year. The figures for 1893 are not yet obtainable.

The decrease in the output of silver here as elsewhere, is attributed to the prevailing low price of that metal. Several of the largest silver-producing properties in the county remained closed during 1892, and there is but little prospect of these properties resuming operations until the price of silver advances.

Prominent among the heavy producing mining properties of the county for 1892 were the following: White Swan, $72,642.72; Eagle No. 1, gold, $19,000, silver, $3,250; Bonanza, $54,994.25; Bradley, $20,000; Elkhorn, $16,500, and Chinese produced during the same year about $53,000.

Gold placer mines were discovered in Baker and Union counties more than 40 years ago, and the output of the placers in these two counties up to the present time is estimated to have been no less than $20,000,000. The surface diggings were worked out pretty thoroughly during the first 10 years of mining operations here and the problem of working deeper in the gravel here can only be solved by the success of hydraulic mining of these properties. Hydraulic mining, however, requires large capital, and until capitalists become interested in the development of the deep placers in this part of the state, placer-mining on a large scale will not be successfully conducted.

There is but little free-gold quartz found in Eastern Oregon. The numerous five, ten and twenty-stamp mills now lying idle scattered along the banks of the Snake river as far as Canyon City, are monuments to the truth of this statement. In this district, however, are numerous veins of base, low-grade sulphuret ores varying in length from a few feet to many miles and from a few inches to 20 and even 30 feet in width. These sulphurets when concentrated are worth from a few cents to $4 a pound. While the sulphurets have a great range of value, it has been found that a majority of these ores are high enough in grade to stand the expense of shipment and still leave a handsome profit to the mine owners. Union and Baker counties are rich in many valuable mining properties now lying idle, and as soon as capital becomes interested in this section this will be one of the greatest mineral-producing belts of the coast.

To Mining Men.—James W. Virtue, the well-known mining man of the state, with headquarters at No. 225 Stark street, Portland, has had the advantage of 25 years' experience in the mines of Oregon. Mr. Virtue was the mining commissioner of Oregon to the Philadelphia and New Orleans world expositions and he also made the valuable exhibits at the Portland exposition for three years. Mr. Virtue examines mines and renders careful reports, and he can furnish all desired information on the mines of the Pacific Northwest.

Huntington, Oregon.—Huntington, in Baker county, is situated within two miles of Snake river, which is the dividing line between the states of Oregon and Idaho. It is the end of a division of the Union Pacific railroad and is 404 miles east of Portland. It is also the end of an important division of the railway mail service, east and west-bound postal clerks changing at this point.

Huntington is really a railroad town. The railroad repair shops of the Union Pacific are located here, as are the round house and other important buildings. The Union Pacific regularly disburses here every month all the way from $2,500 to $4,000.

In addition to this source of revenue Huntington is also the trading point for the Snake river valley and Harney river valley agricultural districts, the chief products of which are grain and fruit. During the past year a steamboat was constructed at a cost of $25,000 to run between Huntington and the Seven Devils copper district, a distance of 70 miles, and the steamer is now plying regularly on this route. A stage line is also operated from Huntington to Mineral City, 25 miles distant, at which latter point are located two large smelters. The two points above named are directly tributary to Huntington. The town now has a population of about 500. It contains five brick business blocks, a brick school house, just completed at a cost of $7,000, and a handsome Congregational church. The town supports one weekly paper, *The Huntington Herald*. The traveling public finds excellent accommodations at Huntington in one good hotel and three well stocked livery stables. Huntington has made a most encouraging growth during the past few years and the prospects for advancement at this point in the near future are very encouraging.

St. Helens, Oregon.—St. Helens, the seat of justice of Columbia county, is located on the Columbia river, 27 miles distant from Portland by the water route. It is also reached by means of the Northern Pacific railroad, via a short stage connection at Milton, the distance between St. Helens and Portland by the land route being about the same as it is by water. All steamers plying on the lower Columbia touch at this point.

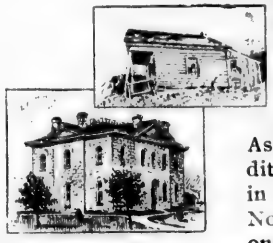
St. Helens is one of the oldest towns in the state. The townsite here was platted before 1850, prior to the time when the first plat of the Portland townsite was filed. The town is supported by the farming and timber resources of the rich country adjacent. Columbia county, of which the town is the seat of justice, contains nearly 500,000 acres of land. The largest piece of agricultural land in the county is comprised within the Nehalem valley. The river from which this valley derives its name, rises in the Coast Mountains. It reaches the ocean by a winding course, just above Tillamook Bay. The soil of this valley is rich. In addition to its possibilities in agricultural resources, coal of good quality has been discovered in the valley, and it is lack of transportation facilities alone that prevents the prompt development of the coal mines here. The croppings in the valley already prospected are only 50 miles distant from Portland, and when these mines are connected with Portland by a line of railroad, the latter city will doubtless derive its principal supply of coal from this source. St. Helens at the present time is the chief center of trade for almost all of Columbia county. Established at this point is a large sawmill, a bank, a number of merchandise stores, two hotels and a well conducted weekly newspaper, *The Oregon Mist*. Among the public buildings of the town may be mentioned a public school, a number of churches, the Columbia county court house, and residences of the wealthy residents, all of which structures are attractive pieces of architecture. Many of these residences are built on the brow of the hill which skirts the city, a site that commands a fine view of the river below and of the snow-capped peak of the Cascades, Mount St. Helens. St. Helens today has a population of about 250, and it is the largest and most important town on the Columbia river between Portland and Astoria.

Among the representative firms of St. Helens may be mentioned the real estate, conveyancing and title abstract firm of Cole & Switzer. These gentlemen have possession of the abstract books prepared by Judge Moore, which contain abstracts of title to all the property in Columbia county. Cole & Switzer have listed on their

books some of the most desirable farm property in Columbia county, and will cheerfully give information by mail or personally concerning the same to those seeking this class of property for settlement or investment. The firm also has an extensive law practice in all the courts of the states as well as the United States courts. Mr. Dillard is associated with the firm as counsel in this branch of their business.

Astoria, Oregon.—An interest attaches to a recurrence to the events of the early history of Astoria that is not perhaps connected with the history of any other place in the state. It was at this point that one of the first settlements was made on the coast. It was into the placid waters of the Columbia river that Captain Gray sailed his ship in 1792, the river now bearing the name of the vessel which safely carried Captain Gray's little party across the Columbia river bar more than 100 years ago, and it was near the mouth of the Columbia where Astoria is located that the famous Lewis & Clark expedition rested from their long journey across the continent in 1805. The party reached the present site of Astoria in November of the latter year and camped for several months on the shores of Young's Bay just south of Astoria. Close upon the heels of the Lewis & Clark party followed the first actual white settlement at Astoria. In 1810 the great fur trader and merchant prince of New York, John Jacob Astor, who lent his name to the young city, established a trading point, and it was thus that Astoria was born, and it has been since the date of the selection of this point by the Astor emissaries as a trading point that the interesting events have occurred which make up Astoria's history.

OLD CUSTOM HOUSE.



CUSTOM HOUSE AND POSTOFFICE, ASTORIA.

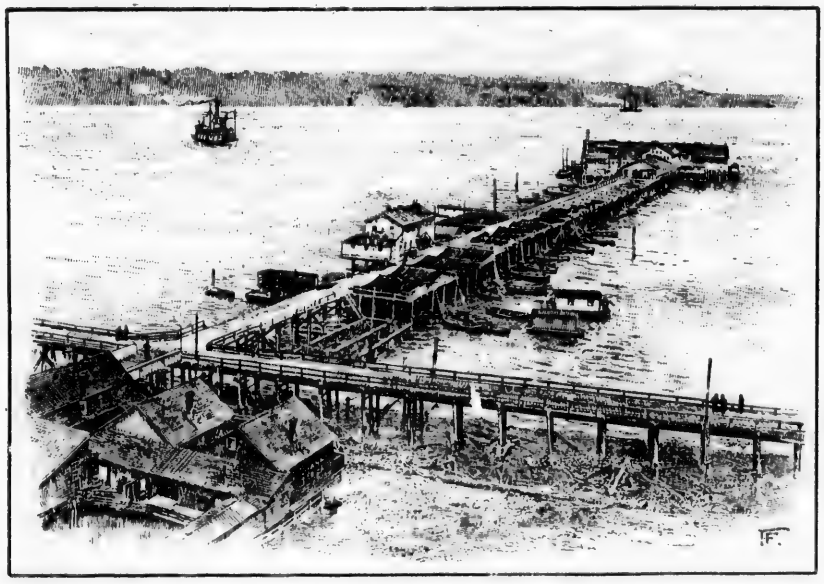
Between 1810 and 1844 the life of the residents of Astoria was made up of many vicissitudes and constant petty bickerings. The country at the mouth of the Columbia during that long period of 34 years being alternately under American and British domination, the ultimate destiny of the people here was shrouded in uncertainty. In 1844 John M. Shively, of Kentucky, a worthy successor of the earlier pioneers, took up a donation land claim where Astoria now stands and laid out the first townsite here. The subsequent history of Astoria is an oft-told tale. Between 1844 and the early 70's Astoria struggled along very much as did most of the small towns of the sparsely settled country of Oregon and Washington. The people here did a little trading, they caught a few fish from the waters of the Columbia here, which teemed with the rich salmon and other varieties of the finny tribe, they sawed enough lumber to meet the local demand, but business was handled in Astoria during this time in the same careless way that business was done in most of the small towns of the state, and it has only been within the past 15 or 20 years that Astoria has made any substantial growth.

PUBLIC SCHOOL, ASTORIA.

It was in 1875 that the people of the coast first made the discovery that the royal chinook salmon, which only frequents the fresh waters of the Columbia river, was one of the finest food fishes in the world, and that it was especially adapted to canning. Canneries at once sprung up all along the river for a distance of 50 to 75 miles

above its mouth for handling this fish, and the headquarters for all this great fishing industry has always been at Astoria. In a very short time after the establishment of these canneries, Astoria sprung from a mere hamlet of a few hundred population to a metropolitan city of 6,000 people. The place has continued to grow steadily since that time up to the present time, when Astoria is now accredited with a population of 10,000 people. In population it is even the rival of the state capital, Salem, which is the second largest city in Oregon.

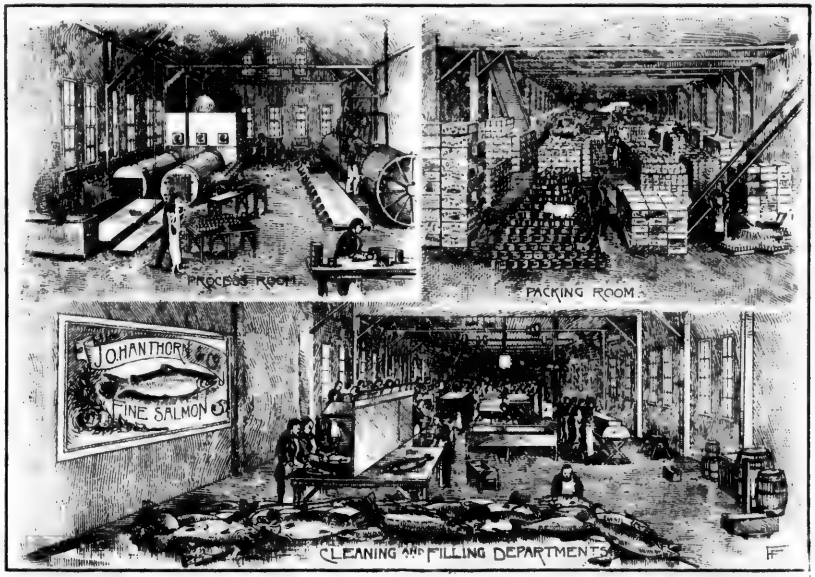
The salmon industry is today, as it has been for more than 15 years past, the mainstay of Astoria's prosperity. While a number of important industries are now maintained in the city at the Columbia's mouth, it is the canning of salmon and the interests which salmon canning supports on which Astoria bases its hopes for good or bad business. The royal chinook, the steelhead and the silverside species of salmon must all pass Astoria in their annual migrations to the spawning grounds at the heads



J. O. Hanthorn & Co.'s Cannery, Astoria.

of the numerous small streams which empty into the Columbia. Astoria, as before stated, is the headquarters for the great canning interests of the river. In operation at Astoria are nine large canneries, in which are invested over $2,000,000 of capital. During the fishing season these canneries give employment to several thousand men, and the value of their annual output is from $2,000,000 to $3,000,000. During prosperous seasons among the cannerymen on the river, shipments from these canneries have reached over 2,000 carloads during a single season. The salmon canning interests of the lower Columbia river are fully described in a separate article of "The Handbook." Another great and constantly growing industry of Astoria is the saw-

ing of lumber. Thousands of square miles of pine, hemlock, spruce and fir forests are found in the near vicinity of Astoria, and the quality of the timber here is of the same high character as is found on the best parts of the Puget Sound country. Trees are found in these forests of over 250 feet in height, and measuring from 3 to 12 feet in diameter. The sawmills at and near Astoria have made shipments, principally to Mexico, South America, Australia, China and the ports of the United States, aggregating over 20,000,000 feet during a single year. Three large sawmills, in addition to several planing mills and a number of box factories, are now running at Astoria.



INTERIOR SCENES, CANNERY, J. O. HANTHORN & CO., ASTORIA.

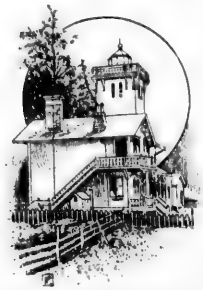
J. O. Hanthorn, the subject of this sketch, who is the sole proprietor of the well-known salmon cannery known as the J. O. Hanthorn & Co. cannery, was born in Westerville, Franklin county, Ohio, in 1851. He came to Oregon with his father, N. M. Hanthorn, in 1862. Young J. O. learned the tinsmith business in Portland, Oregon; starting out for himself when between fifteen and sixteen years old, then became interested in the salmon business by working for Hapgood & Hume, the oldest cannery on the coast. After working two seasons there, he engaged as superintendent for R. D. Hume, a well-known salmon packer, and built his first cannery at Bay View, Washington, where Mr. Hanthorn was superintendent for four years. In 1876-77 J. O. Hanthorn formed the partnership of himself, Wm. Wadhams and Wesley Jackson, and built a large plant at Astoria, Oregon. Since then Messrs. Wadhams and Jackson have disposed of their interests and Mr. Hanthorn is now the sole owner, although the business is known as J. O. Hanthorn & Co. Nothing but the choicest

goods go out under the name of Hanthorn & Co.; every can warranted A1. His annual pack of salmon is about 30,000 cases of various sizes. The Hanthorn brand of salmon has won for Mr. Hanthorn a reputation that he is proud of and is well-known all over the world. Mr. Hanthorn has been successful in business and has many friends all over the United States, including a good number in Europe. The cuts on pages 295 and 296 show the interior and exterior of the plant.

J. O. HANTHORN, ASTORIA

The finances of Astoria are looked after by four strong banks, which carry average deposits aggregating over $1,000,000. The city has the benefit of a finely equipped electric light plant, the street improvements are fully abreast of the times, a good water-works plant is maintained, and the city has a good volunteer fire department. The east and west extensions of the city are connected by an electric street-car line, which operates three miles of road. The city supports good school. and 11 strong church organizations are maintained here. In public improvements Astoria is not behind any city of equal population on the coast, and the trade of Astoria, being principally with those industries the product of which finds a ready market for cash, the business here is generally in a very prosperous condition.

Astoria has excellent connection, by steamship lines, with San Francisco and the other coast ports. Ships visit this point from all parts of the world, and numerous lines of steamers ply regularly between Astoria and Portland, as well as between Astoria and all river settlements. The seaside travel during the summer months from the interior to Long Beach and other points on the Washington side, and to Clatsop on the Oregon shore, passes directly through Astoria, and adds directly to Astoria's volume of trade. Many of these pleasure-seekers stop off for a few days at Astoria, while the principal part of the supplies for the seaside resorts spread along the coast for miles above and below this point, are purchased from Astoria storekeepers.



U. S. LIGHT HOUSE, POINT ADAMS.

The great jetty at the mouth of the Columbia river, a work that owes its inauguration to the efforts of Congressman M. C. George, in 1885, was practically completed in 1891, at a cost of $2,000,000. This jetty has proved of inestimable value to Astoria, as it changed an 18-foot channel (low-water measurement) across the bar to a channel of a minimum depth during the lowest tides of 30 feet. The new channel is perfectly straight, three miles in width, and leads to a well sheltered and

large harbor inside the bar. It is as a seaport that Astoria lays her chief and best founded claim for future greatness. It is worthy of note that there are really but three first-class inlets on the Pacific coast shore-line of the United States. These are the Golden Gate, at San Francisco, the Columbia river, and the Straits of Fuca, leading into Puget Sound. The waters of none of these inlets drain as large or as rich a section of country as does the Columbia. Deep-draught ocean vessels now ascend this stream and the Willamette to Portland, 110 miles inland, without the least difficulty, at all seasons, and river steamers have a clear water-course from Astoria to the Cascades, a distance of nearly 150 miles. From the Cascades to The Dalles, a distance of nearly 50 miles, the river is navigable for large steamers. Above The Dalles is a series of obstructions which can be easily overcome by the construction of a canal and locks. Above these obstructions, on the Columbia and Snake, the latter being the chief tributary of the Columbia, the river is navigable to Lewiston, in Idaho, a distance of over 400 miles from the Columbia's mouth. Boats ply, however, on the upper Snake hundreds of miles east of Lewiston, and the upper Columbia, even into the British possessions, carries a sufficient volume of water to float steamers of large tonnage, and this, too, at a distance of 1,000 miles or more from the point where the waters of this noble stream join the salt waters of the Pacific ocean. It is at the gateway of this vast empire that Astoria is located, and it is the development of the varied resources of this wonderful region, comprising thousands of square miles of territory, that will some day make Astoria one of the large cities of the continent.

LIGHT HOUSE, CAPE DISAPPOINTMENT, WASHINGTON

The great pressing need of Astoria at the present time is railroad connection with Portland and the interior cities of the state. Oft repeated efforts have been made by prominent citizens looking to the consummation of this great work, but although work has several times been commenced on railroad lines leading out from Astoria, that city is still denied the railroad connection she has so long sought. A line of road now runs from Astoria to Clatsop Beach points, a distance of 20 miles. It is the hope of Astoria people that arrangements have at last been completed which will result in the city's securing the much coveted rail connection with Portland and the leading points of the Willamette valley. A land subsidy has been subscribed and this has been accepted by a gentleman representing a very wealthy syndicate. It is expected to have the line between Astoria and Portland in operation by October of the present year, [1894]. The completion of this road would mean much to both Astoria and Portland and it is gratifying in this connection to say that any steps looking to its early completion would receive the cordial support of the leading men in both cities.

SURF-BATHING ON THE OREGON COAST.

Clatsop Beach, Oregon.—From Fort Stevens, at the mouth of the Columbia river, on the Oregon side, south to Tillamook Head, a distance of 20 miles, there extends the unbroken line of shore beach known as Clatsop. For evenness of surface

and attractiveness of immediate surroundings, this shore has few equals in the United States. Its advantages for summer resort purposes are now so well appreciated that numerous hotels and cottages have been built at different points along the higher points above tide level, and this beach is now annually frequented by thousands of pleasure seekers who find here relief from the heat of the interior during the summer months, and relaxation from the cares of city life.

Clatsop Beach points are reached from Portland by the Union Pacific line of steamers and the steamer Telephone of the Columbia River & Puget Sound Nav. Co., which connects at Astoria with the Astoria & South Coast railroad. After leaving Astoria Gearhart Park is the first point on Clatsop Beach reached by the cars. The Gearhart hotel here is located in a beautiful grove just back of the beach. This house offers all the comforts and conveniences uusally found in any of the Atlantic beach resorts. The Chatauqua circle meets here every summer and a number of excursion parties regularly make Gearhart Park their objective point during the open season. Seaside, located at the terminus of the railroad, is quite a settlement. It has made a steady growth during the past few seasons and is now one of the prominent coast points frequented by pleasure-seekers. At Seaside is found a wide beach which slopes gradually back from the ocean. The bathing here is absolutely safe at all stages of the tide. Back of this beach are pleasant groves intersected by romantic, shaded pathways, affording occasional glimpses of the winding Necanicum, one of Oregon's famous trout streams. Only a short distance to the south of Seaside the eye rests upon the rugged head of Tillamook, which stretches far out to sea and forms an effectual barrier to the south beyond this point. Summer guests at Seaside find an ever unending round of pleasure in excursions to the interior, trout fishing, clam digging and bathing, and this is rapidly becoming one of the most popular resorts of the coast.

NECANICUM RIVER, CLATSOP BEACH.

The Seaside Opera House.—The growth of Clatsop Beach in favor as a seaside resort has made the location of a public hall or social club-room at this point almost a necessity. To meet this want, Mr. R. L. Eberman, son of a Clatsop county pioneer of '42, who is still living, opened the Seaside Opera House in 1893. The building is a neat two-story frame structure, surrounded by a delightful grove. The upper floor is an airy, well-ventilated hall, 48 x 24 feet in size, and is devoted to theatricals, dances, literary and other societies. It is only rented for respectable assemblages and adds its quota to the enjoyment of the seaside's summer residents. The ground floor is used for saloon purposes and for private card-rooms and supper-

PHOTO. BY TOWNE.

SEASIDE OPERA HOUSE, SEASIDE, CLATSOP BEACH.

rooms. Visitors who yearn for an occasional return to city pleasures will find here excellent billiard and pool tables as well as choice imported wines, liquors and cigars. In the adjoining grove are tables for outside wine parties or clambakes.

The Grimes House, Seaside.—E. M. Grimes located at Seaside, Clatsop Beach, with his father in 1871. Their intention at the time was to build up a seaside resort at this point, and the reputation earned by the Grimes House attests the successful outcome of their efforts. Located in a grove on the picturesque banks of the Necanicum and within easy reach of the ocean, nature has done much here towards creating an ideal summer resort. Mr. Grimes leaves no stone unturned in adding needed artificial improvements to nature's own handiwork at this point. The Grimes House is annually the summer home of hundreds of weary city dwellers from Portland and other cities who find here all the comforts of their own homes combined with bracing air and delightful surf-bathing on a beach as smooth and hard as a floor of asphalt. Mr. Grimes served 1,500 meals in one day during the "Elks" picnic to the seaside in 1892. This is an evidence of the capacity of his house and of the ability of the caterer who has so long presided over its destinies.

PHOTO. BY TOWNE.

GRIMES HOUSE SEASIDE, CLATSOP BEACH.

The McGuire House, Seaside.—Genial C. A. McGuire, known to friends and patrons as "Judge," conducts the well-known and popular McGuire House at Seaside on Clatsop Beach. This house is open throughout the year. The number of winter guests at the house annually becomes greater as the pleasure of seaside life during this season of the year becomes better known and appreciated. It is during the summer that The McGuire is at its zenith of popularity. During the long days the house is crowded to its full capacity, and it is worthy of note that the same guests return season after season to enjoy its comfortable quarters and bounteous fare. The house is located on a beautiful drive extending along the Necanicum and it is within three minutes walk of the beach. An excellent bar, well supplied with choice cigars and liquors, is run in connection with The McGuire. The bar, however, is in a separate building from the main house so that it can not possibly prove of the least annoyance to lady patrons.

PHOTO. BY TOWNE.

McGUIRE'S HOTEL SEASIDE.

Seaside Resorts of Pacific County, Washington.—Commencing at Ilwaco on Baker's Bay, which is, properly speaking, a part of the mouth of the Col-

PHOTO. BY TOWNE.

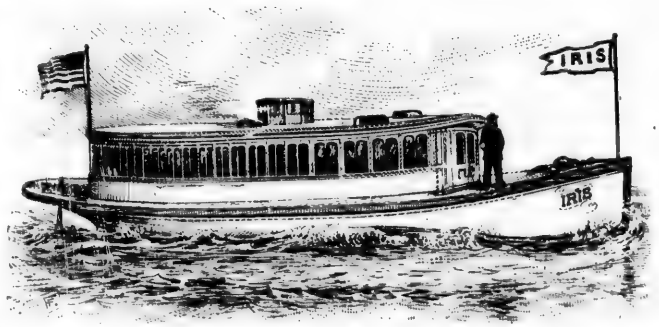
BATHING HOUR, LONG BEACH.

umbia river, on the Washington side, and running north for about 20 miles to Willapa Harbor (formerly known as Shoalwater Bay), is the half-sandy and half-wooded peninsula which, spoken of in its entirety, is referred to as North Beach. This is in contradistinction to the beaches on the Oregon side and south of the Columbia river which, taken together, bear the name of South Beach. Nature evidently intended the peninsula to the north of the Columbia river for summer homes, and during the past few years the entire North Beach may be said to have been devoted to seaside resorts for the crowded cities of the interior.

PHOTO. BY TOWNE.

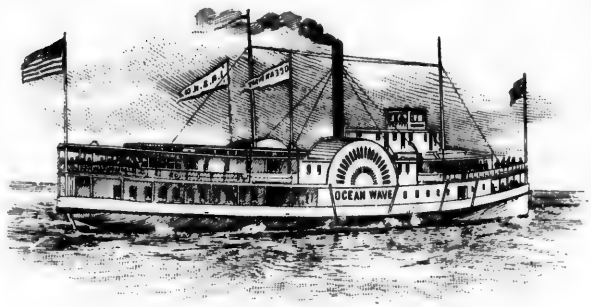
U. S. LIFE SAVING CREW, LONG BEACH.

Foreseeing the growth which the peninsula was certain to enjoy in the future as an ideal summer resort, a few capitalists, prominent among whom may be mentioned L. A. Loomis of Ilwaco, and Jacob Kamm of Portland, some years since formed the Ilwaco Railway & Navigation Company. The plans of the company included the establishment of a perfect system of water and rail communication between Portland and the beaches of the peninsula, with an ocean terminus at Sealand the most northerly settlement on the peninsula. This company is now operating two boats daily between Astoria and Ilwaco. These boats run the year round and connect with trains at Ilwaco for Sealand and all intermediate beaches. These boats are the Ilwaco and the beautifully modelled and fleet little naptha launch, Iris. In addition to this regular service the company in 1891 built the magnificent sidewheel steamer Ocean Wave, which now plies regularly between Portland and Ilwaco during the summer season. This may be said to be the popular route to the coast as it is the only line making close connection by rail for all beach points, and thousands of pleasure-seekers crowd the decks of the Ocean Wave during the heated season. This elegant steamer is 215 feet in length, with 30-feet beam, and is fully equipped with all of the latest improvements intended in any way to add to the comfort or enjoyment of passengers. A trip to the coast on the Ocean Wave affords a delightful initiation to the subsequent pleasures of a summer outing at the seaside.



I. R. & N. CO.'S NAPTHA LAUNCH IRIS, ASTORIA-ILWACO.

Ilwaco, on Baker's Bay, may properly be called the gateway through which all



I. R. & N. Co.'s Steamer, Ocean Wave, Portland-Ilwaco.

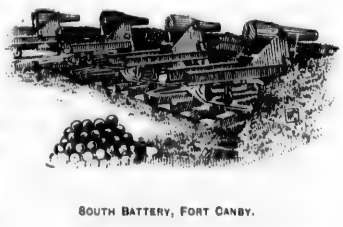
travel must pass to reach the beaches beyond. This is an attractive little town of about 400 population. The principal industries of the place are fishing and lumbering, and, during the summer months, the entertainment of Seaside visitors, many of whom prefer the attraction of this point to those of points further up the coast. The culture of cranberries is yearly receiving increased attention on the marsh lands near Ilwaco, and with excellent results. The Pacific Cranberry Company of California own about 2,000 acres of marsh land here of which about 40 acres have already been planted to cranberries. The improvements already made by the company have involved an outlay of about $40,000. It is estimated that with two canneries, the lumbering, cranberry and railroad interests centering at Ilwaco annually put into circulation at this town about $600,000. This is a solid town and is entitled to the attention of all visitors to Washington's coast.

Fort Canby.

PHOTO. BY TOWNE.

Big Gun and Light House, Fort Canby.

About one mile north of Ilwaco is North Beach the nearest beach property to Baker's Bay. This has one great advantage over some of the other beaches in the abundant supply of spring water obtained from an adjoining butte or knoll. This water flows through piping by force of gravity alone into all the summer cottages at this point. This feature of North Beach undoubtedly influenced the late W. S. Ladd, Judge Whalley, Mrs. R. H. Holman and others in selecting North Beach for their summer homes. The five-acre butte at North Beach would make a commanding eminence, well adapted for the erection of a fine hotel. A well-built picturesque plank road connects Ilwaco with North Beach, thus affording a delightful driveway between the two points. The two places, as before stated, are also connected by the railroad of the Ilwaco Railway & Navigation Company whose cars stop at Butte Station. The celebrated rocks of the peninsula, so popular for deep-sea fishing, are nearer to North Beach than they are to any of the points along the peninsula.

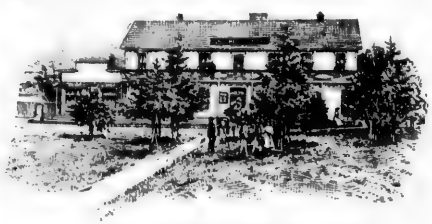


South Battery, Fort Canby.

The Ilwaco Railway & Navigation Company operates 18 miles of railroad between Ilwaco and Sealand. The broad expanse of old ocean with the white-capped surf and glistening sands of the beach are in sight of the traveler over this line for nearly the entire distance between the two points. The first stopping place of importance made by the train is Seaview. At this point was located the famous Stout's hotel, erected by Mr. Stout, the pioneer settler of the peninsula. This hotel was destroyed by fire in 1891. Here, as elsewhere along this beach, are found delightful groves or natural parks, which form a pleasing background to a wide, hard beach offering advantages for bathing not excelled by the beaches of any of the Atlantic coast resorts. Seaview was selected by the Hon. H. W. Corbett as the most desirable site for the erection of his handsome two-story summer residence, which occupies a block adjacent to the depot and which is also in full view of the roaring sea beyond. A few moments after leaving Seaview by rail another collection of pretty cottages is reached. This settlement is known as Long Beach. Many prominent Portland families own cottages here, and Long Beach may be said to be the center of population on the peninsula. Throughout the season a greater number of people may be seen sauntering along the beach or enjoying the benefits of surf bathing at Long Beach than at any other place on the peninsula. Social gatherings both indoors and on the beach are of daily occurrence at this point during the summer, and many excursion parties from other seaside points select Long Beach as their objective point. It is here that the famous "East Portland Camp" is located, and it is here that some of the most pleasurable features of a sojourn at the seacoast are indulged in.

TINKER'S, LONG BEACH.—This popular resort at Long Beach, the center of summer population on the peninsula, is managed by the owner, Mr. H. H. Tinker, a gentleman who has done much towards building up the reputation of the Pacific County seashore. Tinker's, a household word with summer ramblers, is surrounded by many of the cottages of Portland's wealthiest citizens, and it is equally accessible to shady groves and dashing breakers. The house contains 40 bedrooms, but so great have been the demands on Mr. Tinker's popularity during the past season that he found it necessary to secure 50 extra rooms in outside cottages to accommodate his patrons. The beach in front of Tinker's is a center of attraction during the summer season. A thousand people congregated here during bathing hours is not an unusual sight. Tinker's has an established reputation for first-class accommodations, excellent table and reasonable rates.

PHOTO. BY TOWNE.



LONG BEACH HOTEL (TINKER'S), LONG BEACH.

LONG BEACH HOT AND COLD SEA BATHS.—Invalids, or those who are not strong enough to withstand the chill attendant on a plunge in the ocean, can find a pleasant substitute for surf bathing at the hot and cold sea-water baths established at Long Beach by Mr. P. Kohl. Water for these baths is drawn direct from the Pacific ocean, and is heated to any temperature desired by the bather. Cleanliness is the leading feature at Mr. Kohl's establishment. The rooms, tubs and towels are all carefully looked after. The health-giving results obtained by bathing in warm sea-water are testified to by all physicians. Invalids, or those who desire private

baths in water heated to suit their pleasure and comfort should call at this sanitarium.

The next station beyond Long Beach on the line of road is Tioga, which is owned by a Portland syndicate, and a little beyond Tioga is Pacific Park. This latter place is another very popular resort and, like the other beaches, has its votaries who claim that here is to be found the best bathing, the largest clams and the most exhilarating breezes of the coast in Pacific county.

THE "SEA BREEZE" PACIFIC PARK.—On the whole peninsula known as Long or North Beach, there is no more beautiful location, or one affording more advantages, than the Hotel Sea Breeze, at Pacific Park Station, and conducted by Mrs. A. E. Stout, so long connected with the hotel at Sea View.

PHOTO. BY TOWNE.

SEA BREEZE HOTEL (MRS. STOUT'S), PACIFIC PARK.

This house, in its present enlarged and improved state, was thrown open to the public in the summer of 1893. It enjoys the patronage of many prominent Portland families, as well as the best class of tourist patronage. It is located in a large pleasure grove containing 190 acres. It embraces among its many attractions natural picnic bowers, lakes where boating and fishing are free to guests, rare glimpses of lake and woodland scenery, and patches of lawn for croquet and other out-of-door games. The beach is very accessible, and leaves nothing to be desired for lovers of surf-bathing. The furniture of the "Sea Breeze" is new, and all its appointments are neat and tasty. Mrs. Stout takes special pride in her table, which is abundantly supplied with fruit and vegetables from her own gardens. The prime beef, veal, mutton and chickens which she serves to guests are also raised on the premises.

PHOTO. BY TOWNE.

CLEAR LAKE, NEAR SEA BREEZE HOTEL, PACIFIC PARK.

Guest's horses and carriages can be cared for in the commodious stables connected with the hotel. The beef used is from imported thoroughbred shorthorn stock. These fine animals can be purchased from Mrs. Stout from her annual spring raising. The cream dinners for which Mrs. Stout has won an enviable reputation, are supplied to parties of any size on short notice. Lots in the park adjoining the hotel are sold at reasonable figures and on easy terms to those who desire to erect summer cottages at this ideal resort. The "Sea Breeze" is open the year round.

As the train sped northward Ocean Park soon hove in sight. This point is 12 miles north of Ilwaco, and a little beyond where the railroad makes a turn across the peninsula to its terminus at Sealand on Shoalwater Bay. Ocean Park was selected as a location for a seaside resort by the Methodists in 1883. An association of prominent members of this denomination determined that here was an advantageous site for the establishment of a semi-religious, semi-social summer home. Rev. Wm. B. Osborn, who years ago selected the ground and presided over the openings of the famous Ocean Grove near Long Branch on the New Jersey coast, picked out this location and was instrumental in securing its adoption by the Methodists of the Pacific Northwest for a summer home. The grounds here have been beautifully laid out on a liberal scale as to parks, broad avenues, etc., and weighing all the advantages offered for summer residences here there is perhaps no place on the entire peninsula which presents greater attractions than does Ocean Park. The sea-bathing here is unsurpassed for enjoyment and safety. The beach here has a very gradual descent into the ocean so that it is impossible for a bather to find himself suddenly in water over his depth. There is also no undertow here. A short distance beyond Ocean Park is the town of Sealand, the northern terminus of the line. This town is located on Shoalwater Bay directly south of Oysterville, and is the headquarters for clams and oysters. These delicious bivalves are shipped from here to all parts of the coast, and they enjoy an excellent reputation in both Washington and California.

This short sketch but poorly portrays the advantages and delights of North Beach resorts. It can be stated, however, that this is one of the most attractive beaches on the coast, and the thousands of people who annually congregate here furnish ample evidence of the appreciation of the merits of this beach by the residents of the states of Oregon, Washington and Idaho.

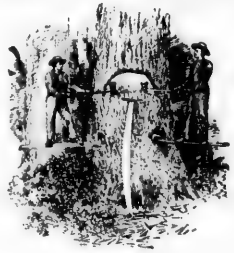
SEALAND, WASHINGTON.—There is perhaps no part of the entire Pacific county peninsula which presents greater attractions than does Sealand, the terminus of the Ilwaco Railway & Navigation Company's line. The advantages of Sealand have been considerably overlooked, while those of other beaches north of Ilwaco have been constantly exploited and made prominent.

It is certainly time that Sealand and the many conspicuous advantages it possesses, which are lacking at other places, should be fairly and fully presented to the public, and especially to those who meditate the purchase of seaside property, either as an investment or for the erection of summer homes. Sealand is located on Shoalwater Bay, now known as Willapa Harbor, within easy reach of the ocean, which thus gives it double advantage as a bathing resort. Those who like the turbulent tossing of the ocean surf, and are sufficiently hardy to withstand the effects of its chilly waters, can bathe here as their desires prompt them, while those, and there are a large number at the beach every summer, who find the temperature of the waters of the Pacific and the buffeting of the waves too much for their endurance, can find calmer waters and waters of a temperature many degrees warmer than those of the main body of the ocean washing the shores of Shoalwater Bay, at Sealand. Here one can swim, which is out of the question in the ocean, or otherwise disport oneself in the water for half an hour or more at a time and come out refreshed, invigorated and without the slightest chill or unpleasant after result. Here, also, both razor-shell and Eastern clams are found in abundance, while at other beaches the razor-shells are practically exhausted, and the Eastern clams are not found at all. An excellent hotel, the Morrison house, is found at Sealand, and

a number of excellent stores at which to purchase the commodities of life. An investment in a few lots at Sealand now will be the cause for congratulation later when its advantages are understood and lots have advanced to double and treble the price at which they can now be obtained.

Cathlamet, Washington.—Cathlamet, the seat of justice of Wahkiakum county, Washington, is situated on the Columbia river, 71 miles from Portland and 17 miles this side of Astoria. It is a thriving little town of about 200 inhabitants and is one of the older established settlements along the river.

The principal industries of Cathlamet are lumbering and salmon canning. Located near are four large logging camps. One of the logging companies operates about four miles of railroad for hauling logs from the camps to the river. These logs are floated principally to the large sawmills at Portland. The Warrens' salmon cannery, located at Cathlamet, is one of the largest on the river. Cathlamet has a good school house and an excellent system of public instruction is maintained. Several large business houses are located at this point. The town is exceptionally well supplied with hotels. The McGrath House here, containing 25 rooms, is located within easy distance of the steamboat wharves, on high ground, and is supplied with pure, spring water conducted to the house through pipes. The transient rates at this house are $1 a day, with a rate to permanent guests of $5 a week. The Columbia Hotel has 32 bedrooms, besides a bar and billiard room. An excellent home table is set at this hotel and special attention is paid to commercial travelers. Transient rates at the Columbia are from $1 to $1.50 a day, with special rates to permanent guests of from $4.50 to $5.50 a week.



CUTTING TIMBER NEAR CATHLAMET.

Cathlamet is reached by two steamers of the Union Pacific and also by the Telephone and Lurline which ply regularly between Portland and Astoria daily.

Kalama, Washington.—Kalama, the county seat and chief city of Cowlitz county, enjoyed the distinction at one time of being the rival of Portland. It was at this point that many speculators selected a site for building one of the leading cities of the Northwest. This was at the time that the Northern Pacific railroad was being constructed between Kalama and Tacoma. The Columbia river between Kalama and the sea is navigable for deep-draught vessels, and at the point where this great transcontinental line of railroad reached the Columbia, it was hoped to build up a great shipping and commercial center. In pursuance of this hope a townsite was platted here covering a distance of about three miles back from the river front. Lots went off rapidly to eager purchasers and the erection of a large number of buildings was commenced. Kalama never attained metropolitan greatness, but is still a town of perhaps 200 population and it enjoys considerable trade with a prosperous tributary section.

Many thousands of cases of salmon are annually forwarded from Kalama by means of the Northern Pacific railroad to New York and other eastern markets. The industries of the town at the present time consist of two fisheries engaged in the business of forwarding fresh Columbia river salmon, sturgeon, smelt and other fish to interior and Eastern markets. These shipments are packed in ice and reach their destination in as fresh a condition as they were when first taken out of the

water. In addition to the fishing company is a sawmill which is supplied with logs cut in the immediate vicinity of the town. Kalama contains a number of stores and two hotels. Recently the discovery of gold-bearing quartz at different points on the Kalama river, varying from 13 to 18 miles distant from the town, has stirred up some little excitement in the place. A mining district has been formed here and good results are looked for on a fuller development of the many promising quartz ledges located here.

Kalama is now reached from Portland either by the cars of the Northern Pacific or by any of the numerous lines of steamers plying on the lower Columbia river and connecting with Portland. The town is 38 miles distant from Portland by the river route, and 40 miles by the Northern Pacific railroad. All trains over the Northern Pacific for Portland are ferried across the Columbia at this point, the huge ferry with a carrying capacity of a full train making close connection between Kalama and Hunters, on the opposite side of the Columbia.

MAIN STREET, LOOKING SOUTH, VANCOUVER.

Vancouver, Washington.—Vancouver, the seat of justice of Clarke county, Washington, is located on the Columbia river a short distance above its junction with the Willamette. The town was named after the early explorer and navigator, Captain George Vancouver, and it possesses considerable historic interest. Quite a settlement was established here 25 years before Portland was thought of, and many things pointed at that time to the selection of Vancouver as the future metropolis of the Northwest. Portland soon forged to the front, however, as the coming great city of the district, and Vancouver remained the site of the fort established here by the United States government, and the trading center of a large and rich section of tributary country.

CLARKE COUNTY COURT HOUSE, VANCOUVER.

In 1823 the Hudson's Bay Company selected this locality for the establishment of one of their main supply headquarters. Representatives of this great trading company made Vancouver their home. The growth of Vancouver has been slow and conservative. It is 18 miles distant from Portland by water and but seven miles by land. Numerous lines of steamers ply regularly between the two points and a finely equipped electric line of road runs from Portland to the shore of the Columbia river opposite Vancouver. The Columbia river terminus of this road has connection with Vancouver by a fast steam ferry which makes frequent trips. Portland is now built down the peninsula nearly to the ferry landing on the Columbia river, and it will perhaps, be but a few years more until Vancouver will become one of the important suburbs of this great city.

PUBLIC SCHOOL, VANCOUVER.

SCHOOL FOR DEAF MUTES, VANCOUVER.

Vancouver now contains a population of about 5,000. The leading industry of the section of country tributary

SCHOOL FOR FEEBLE-MINDED, VANCOUVER.

to Vancouver is the raising of fruit. Clarke county is already noted for its fruit product, especially its Italian prunes, and some of the largest and best bearing orchards of this fine fruit are now found in the vicinity of Vancouver. In the county close to the city are also found fine forests of timber. Four large sawmills are in operation at this point and the output of these mills is sold to a wide market The city owns its electric light plant and excellent water is piped into all its stores and dwellings. A noticeable feature of Vancouver is the number and the architectural beauty of its public buildings. Among these structures are state schools for defective and feeble minded youth, located here; the Clarke county court house, erected at a cost of $75,000; the fine Catholic cathedral; the Catholic school for girls, and a school conducted by the same denomination for boys; the city hall and other notable buildings.

ST. JAMES CATHEDRAL, VANCOUVER.

Main street, beginning at the wharves on the Columbia river, is the principal business street of Vancouver. It is built up solidly on both sides, is well paved with cedar blocks, and it presents a lively appearance during business hours. The residence quarter of the city is back from the river. Handsome and attractive homes are a feature of Vancouver which cannot fail to impress a stranger favorably. These homes are generally surrounded by spacious and well laid out grounds, ornamented with flowers and fruit trees. Vancouver has one of the finest driving parks in the state. Annual races are held here and they are attended largely even by the people of Portland. The park is located on Vancouver Heights, about one mile back from the river. The mile track in this park is considered by horsemen as one of the finest tracks in the West. The park has stable accommodations for 200 horses.

INTERIOR, CATHEDRAL, VANCOUVER.

Adjoining Vancouver on the east is the United States military reservation known as Vancouver Barracks. This embraces one square mile of territory and it divides with the Presidio at San Francisco the honor of being the finest laid-out military reservation in the United States. The parade grounds, lawns, flower gardens and serpenti.. roads of the reservation are kept in perfect order, equal to that of any Eastern pleasure park. In addition it possesses attractions in the different phases of military life which pleasure parks are lacking in. Vancouver Barracks has been

OFFICERS' QUARTERS, VANCOUVER BARRACKS.

steadily occupied by United States troops since 1849. The present garrison stationed here numbers all told about 1,000 people. Military drills accompanied by fine music are of daily occurrence here and they afford a pleasant diversion for the citizens of Vancouver as well as for visitors from Portland who throng the grounds on pleasant days.

LaCamas, Washington.—The most important manufacturing town, perhaps, on the Columbia river, in Washington, is LaCamas, 14 miles east of Vancouver. This is the seat of the great manufacturing industry of the Columbia River Paper Company, with head offices in Portland. This company conducts, at LaCamas, a large paper mill, which now makes the paper for nearly all the leading daily publications of the Pacific Northwest.

The country in the immediate vicinity of LaCamas is rich in resources. All of Clarke county is especially adapted to the growing of fruits, and some of the most productive farms and most highly cultivated orchards in the state are situated near LaCamas. Special attention is paid in this section to the cultivation of prunes. Another rich resource of this section is lumber. The forests back of LaCamas contain large quantities of fir and other woods of great commercial value. LaCamas, at the present time, contains two sawmills, and considerable lumber is shipped from this point. Near the town are streams and lakes which furnish a valuable water power here. This water is conducted direct to the place for manufacturing purposes, and this power is now largely utilized by the factories in operation here.

Congress has granted the right to bridge the Columbia river at LaCamas. The bridge will probably be built by one of the great transcontinental lines of railroad LaCamas has daily connection with Portland, 32 miles distant, by water, steamboats running regularly between these points. Its present population is between 400 and 500.

Washougal, Washington.—Eighteen miles east of Vancouver, on the Columbia river, in Washington, is the town of Washougal. It is also at the mouth of the Washougal river, which joins the Columbia at this place. The Washougal river here furnishes an available power for manufacturing purposes. Washougal is in the center of a rich agricultural and timber section. The chief pursuits followed by the residents of this section are dairying, fruit culture and agriculture. A daily line of boats plies regularly between Washougal and Portland, the distance between the two points, by water, being 36 miles. Washougal contains about 100 people.

Goldendale, Washington.—Goldendale is the judicial seat of Klickitat county. It is located 12 miles north of the Oregon state line at the Columbia river. The town is reached by stage from Grant's Station, on the main line of the Union Pacific railroad, 12 miles distant, daily connection being made between these two points. A daily stage line also runs from The Dalles to Goldendale, the distance being 25 miles.

The present population of Goldendale is about 1,000. The town is situated in the rich Klickitat valley, on the river of the same name. This stream affords ample water power, at Goldendale, to run a large number of factories, but this large power is now only used by a single flouring mill located here, which has a daily capacity of 75 barrels. Another flouring mill is located, however, some distance back from the river. This larger mill is operated by steam power. The other manufacturing enterprise located at Goldendale is a small sash and door factory. Goldendale is a trad-

ing point for a section that is rich in agricultural products and stock, and it is quite a flourishing town.

Goldendale was almost entirely destroyed by fire some three years ago. Handsome one and two-story brick buildings have taken the place of the old wooden structures which formerly lined the business street here, and the town is now in a far more prosperous condition than it was before the fire. The various lines of business are well represented here, and the largest stores carry very heavy lines of goods. A very strong bank, the First National, is located here. This bank was established in 1888, with a capital of $50,000. Its present officers are: John G. Maddock, president; Hugh Fields, vice-president, and O. D. Sturgess, cashier. Four teachers are employed in the public schools here, which are attended by an average of about 200 pupils. Five church organizations are maintained in the town, and each of these worships in its own building. The denominations represented are the Presbyterian, Baptist, Primitive Baptist, Methodist and Christian. Goldendale supports two weekly newspapers, *The Sentinel* and *The Courier*. Two public halls are maintained here, and the town contains three hotels and three livery stables. Considerable money has been spent on a complete system of water works here, and an efficient fire department is maintained. The assessed valuation of town property, in 1892, was $272,000, and the bonded indebtness carried was $12,500, this indebtedness having been incurred in the construction of the water-works system.

The principal products of the Klickitat valley, of which Goldendale is the trading center, are grain of all kinds, fruits, wool and live stock. The area of the valley is about 100 square miles, and it is fast settling up with a thrifty class of farmers.

Kelso, Washington.—Kelso is a small but prosperous town, located in Cowlitz county, on the main line of the Northern Pacific railroad, 51 miles north of Portland and 94 miles south of Tacoma. In addition to the transportation facilities by rail, Kelso has the benefit of a daily line of steamers to Portland by way of the Cowlitz, Columbia and Willamette rivers, the former stream running through the center of the town and navigable to Kelso throughout the year.

The present population of Kelso is about 800. The town is located in the midst of a rich district. The principal industries followed in this section are diversified farming and lumbering. The lumber interests of Kelso are heavy, two large sawmills being operated at this point, in addition to which industries are two shingle mills whose product finds a ready sale in Portland and in the markets to the north and south of Kelso. The forests of valuable fir, cedar and hemlock surrounding Kelso are easily accessible, and the sawing of this timber will prove one of the most valuable industries of the town for many years in the future.

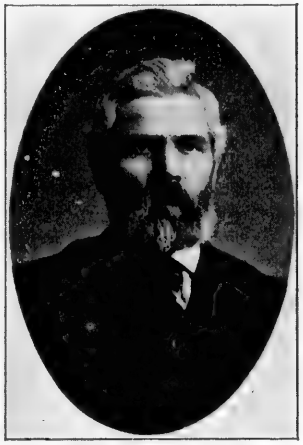
Kelso supports two banks which are on a good financial footing, two schools are maintained here, the town has two churches of the Methodist and Presbyterian denominations respectively, and one good weekly newspaper, *The Courier*, is published at this point. The town was first settled in 1884, and is one of the comparitively new towns along the line of the Northern Pacific between Portland and Tacoma.

Castle Rock, Washington.—Castle Rock is located on the line of the Northern Pacific railroad, 61 miles north of Portland and 84 miles south of Tacoma. It is also located at the head of navigation on the Cowlitz river, a navigable branch

of the Columbia, and a line of steamers is operated throughout the year between Castle Rock and Portland. The town is situated in the midst of a vast forest of the finest timber, and a large area of rich agricultural country is also tributary. The sawing of lumber is an important industry here and five sawmills and two shingle mills are located at this point.

METHODIST CHURCH, CASTLE ROCK.

The present population of Castle Rock is about 900. The official census of 1890 credited the town with a population of 600, but there has been a large growth here since that time. The town is the trading point for the valleys of the South and the Arkansas rivers, where lumbering is done on an extensive scale. Castle Rock contains one bank, a neat opera house with a seating capacity of 600, and a weekly newspaper is published at this point. The people here have the benefit of an excellent public school system, which is in charge of four teachers. The churches represented at Castle Rock are of the Methodist, Christian and Presbyterian denominations.



GEO. F. WHITE, CASTLE ROCK.

In the vicinity of Castle Rock are large and valuable deposits of lignite coal. The property of the Castle Rock Coal Company is connected with the main line of the Northern Pacific railroad by a spur track 2½ miles in length. The coal is now being mined and shipped to distant points. Mr. George F. White is a resident owner of part of the coal property and is also largely interested in Castle Rock realty. This gentleman is the oldest real estate dealer and surveyor in Cowlitz county.

Silver Lake, a beautiful sheet of water, six miles in length, is situated five miles distant from Castle Rock. The lake teems with many varieties of gamy fish, and it is a favorite resort for sportsmen.

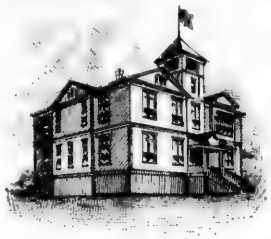
Castle Rock has the distinction of having within its corporate limits the pioneer shingle m ll in the state of Washington. Mr. John Robin erected this mill in 1883, and he is engaged in operating it at the present time. The plant has a daily capacity of 50,000 shingles, and the number of shingles manufactured in 1892 amounted to 12,000,000 The first carload of cedar shingles shipped east of the Rocky Mountains left this mill July 4, 1885.

Winlock, Washington.—The town of Winlock, surrounded by hills covered with fine timber, is picturesquely located on Olequa creek, in Lewis county. It is an important station on the main line of the Northern Pacific railroad, 77 miles north of Portland, 68 miles south of Tacoma, and 14 miles south of Chehalis; the county seat.

In the valley of the Cowlitz, a few miles distant from Winlock, are some 20,000 acres of rich, black prairie land adapted to the highest state of cultivation. This valley commands a full view of the Cascade Mountains, extending from Mount St. Helens to Mount Rainier, and it is one of the most attractive spots in Western

Washington. Located in this tract is the old mission of St. Francis Xavier, founded by the Jesuits in 1830. The Green river country, near Mount St. Helens, where gold has been found in paying quantities, is some 40 miles distant from Winlock, which is the nearest and most accessible outfitting point. The reports of experienced prospectors indicate that this region will eventually become a great mining district. Capitalists are now engaged in developing the mines of the Green river district where placer mining is carried on to a considerable extent at the present time.

PHOTO. BY O. K. HONG.



SCHOOL HOUSE, WINLOCK

Fields of an excellent quality of potters' clay are located near Winlock, and a company is now engaged at this point in the manufacture of fire brick and terra cotta pipes.

Winlock claims a large and handsome school building. The public schools here are in charge of a corps of experienced teachers. The town has one good bank, hotels equipped with all modern improvements, and it supports one ably conducted weekly newspaper. The Methodist, Baptist and Christain denominations own houses of worship here.

Winlock contains today a population of about 900. In addition to being the trading center of a large mining, timber and agricultural district, it is also the supply point for 22 inland villages. Two sawmills are in operation at Winlock. The largest of these mills is owned by the Capital Lumbering Company, which is incorporated with a capital stock of $50,000. This is one of the largest mills in the section of the state in which it is located. It has a daily capacity of 45,000 feet and its annual output amounts to 10,000,000 feet of lumber. N. A. Metzger is the president of the company, A. T. Dix, vice-president, and D. Gubser, secretary and treasurer.

Winlock offers certain attractions that will appeal with particular force to the tourist. Good trout fishing is found in the vicinity of the town, and back from this point in the foothill districts large game is still plentiful.

Chehalis, Washington.—A glance backwards to the early history of that part of Lewis county where Chehalis now stands, will enable the reader to better understand the origin and steady growth of a city at this point. Located at the junction of the Chehalis and Newaukum valleys, the present townsite, originally formed part of the donation land claims of S. S. Sanders and Eliza Sanders, covering a space of one square mile of ground. These claims occupied the very heart of the valley, and any person blessed with a reasonable amount of foresight would have predicted, even back in the 50's, the development of an important distributing point at the present site of Chehalis at some future time when railroads and the consequent increase of population in the sur-

PHOTO. BY R. SHEANE.

PUBLIC SCHOOL, CHEHALIS

rounding country would support such a trading center. The valleys spread out around Chehalis and the slopes of the rich tributary section all incline towards the place.

The old Sander's farm-house, the precursor of the many buildings in this locality which followed it, is still standing in sufficiently good condition for occupancy at the edge of the present townsite. The first business structure erected in Chehalis was a grain warehouse, built in 1872. The Northern Pacific was then running trains over the present Kalama-Tacoma route with a station at Newaukum, which they favored for a town. The officials of the road instructed the farmers of this section to haul their grain to Newaukum and the road would ship it for them. No better evidence of the natural selection of the present site of Chehalis can be found than the rebellion of the farmers of this section in 1872 against the fiat of the railroad company. The farmers, taking the reins in their own hands, clubbed together and erected a warehouse at the point most convenient for shipping their produce, although in doing this they were compelled to get along without the accommodations of a station and to flag reluctant trainmen to enable them to market their products by railroad. The erection of a building for a general merchandise store by an old settler named George Hogue soon followed. The farmers here could not only then find storage room for their products, but they could also purchase at the present site of Chehalis the staple articles of subsistence. A place of trade and barter, an infant city was thus created. The embryo town was christened Sandersville, a name which can still be found on old plats in the recorder's office. In 1875, the proud distinction of a county seat was secured, and Chehalis, named after an old Indian chief, sprung into existence. Here again the manifest destiny of the town was made apparent. Against opposition, and by pledging his word that the court house should not be an expense to the territory, the representative from this section obtained this building at Chehalis by special legislation, which had not then fallen into disuse. The farmers again drew from their coin stockings and a public building was erected at Chehalis by individual subscriptions alone.

Strong in a population of about 100 sturdy citizens and in the undisputed possession of the court house, Chehalis was incorporated and advanced to the first place in Lewis county. The growth of the old town of Sandersville, with its single warehouse and one store, was proportionate to the importance of the days in which the town flourished. Such a continued growth has ever been characteristic of Chehalis. Booms have at divers times struck other Washington towns and in due season burst from their own distention. Chehalis has escaped both booms and boomerangs. Quietly keeping pace with the growth and requirements of its tributary country, it is today a prosperous, self-supporting city of 3,000 population. These figures are conservative, and good judges at Chehalis say that 3,500 population is a fairer estimate of the city.

Each successive year shows an increase in the freight shipments from Chehalis, both in bulk and value and the mercantile trade of the city grows in proportion. In the matter of ample transportation facilities Chehalis is especially favored. It is located on the main line of the Northern Pacific and is on the surveyed route of the Union Pacific. It is also the western terminus of the Northern Pacific branch road to South Bend, on Willapa Harbor, a road that was opened to traffic in December, 1892, and that is now doing a good business.

In 1892 Chehalis was visited by two disastrous fires which swept away 56 buildings. This fire, however, inaugurated the era of brick buildings, only a few of which, had been erected previous to the fire. Among the fine brick structures of the city today may be mentioned the handsome three-story brick Barrett block, built at a cost of $36,000, and the substantial brick and stone building of the First National Bank of Chehalis, erected at a cost of $23,000. The Barrett block, designed for a hotel, was built with a view of the easy escape of its inmates in case of fire. Its wide hallways and easily accessible staircases, together with several reels of hose and attachments in the office and in the upper story, renders all danger from a fatality in case of fire in the building a practical nullity. The First National Bank building is the finest structure occupied by any financial institution between Portland and Tacoma. The portion of this building not used by the spacious bank offices and vaults is used for store and office purposes. Also well worthy of mention is the new stone and brick building of the Commercial State Bank, completed in the spring of 1893 at a cost of $20,000. This is admitted to be the most artistic piece of architecture in Chehalis. The Chehalis Improvement Company, incorporated in 1891, with a paid-up capital of $125,000, finished two fine brick blocks in Chehalis at a cost respectively of $17,000 and $14,000, about the time of the completion of the Commercial State Bank building. The Gem drug store, L. C. Faulkner proprietor, a leading pharmacy of Chehalis, occupies a corner in the more imposing of the two structures with a frontage on two main thoroughfares. Messrs. John D. Rice and W. M. Urquhart, two pioneer merchants of the town, are building and will occupy an imposing brick and stone block adjoining the First National Bank building. These two structures present a solid frontage of 150 feet, with 125 feet of depth, and are really creditable to the city. Messrs. Urquhart and Rice represent the oldest mercantile establishments of Chehalis, Mr. Urquhart having established himself in business here in 1880, and Mr. Rice started in the place a short time after this. An indication of the good feeling existing between the different citizens of Chehalis is the statement that Messrs. Rice and Urquhart, both in the same line of business, general merchandising, should erect and occupy a building in common and engage only in generous rivalry. The firm of Maynard, Everett & Co., carrying hardware and electrical goods, the largest and best stock of goods in this line carried by any firm in Lewis county, own the property adjoining the Rice-Urquhart building and it is their intention to begin in the near future construction work on a similar block.

PHOTO. BY R. SHEANE.

BARRETT BLOCK, CHEHALIS.

PHOTO. BY R. SHEANE.

CHEHALIS IMPROVEMENT CO.'S BUILDING, CHEHALIS.

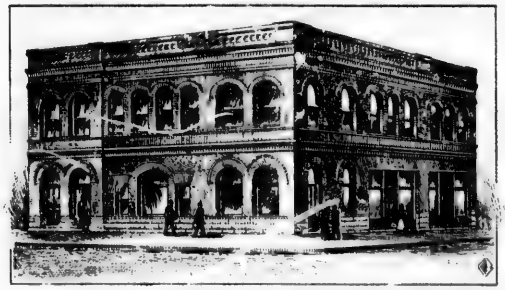
The improvements noted above represent only a few of the many leading enter-

prises of Chehalis, but they tend to show the steady advance of the city in material growth and solid prosperity.

To properly attend to the financial interests of the country of which Chehalis is the center, banking houses early became a necessity at this point. For many years the pioneer banking house of N. B. Coffman fully met this demand in the young town. The outgrowth of this early venture was the incorporation in December, 1889, of the First National Bank of Chehalis with a paid-up capital of $50,000. The incorporators and stockholders of the bank were N. B. Coffman, W. M. Urquhart, John Dobson, D. C. Millett and Francis Donahoe of Chehalis; Walter J. Thompson and Nelson Bennett of Tacoma and B. Lombard of Boston. The officers elected were N. B. Coffman, president; W. M. Urquhart, vice-president, and J. Y. Coffman, cashier. Mr. John Dobson took Mr. Urquhart's place in 1892. The capital, surplus and undivided profits of the bank now amount to $90,000, and the deposits average $200,000. In 1891 the increasing wealth of the city and county, with the consequent increase in financial transactions made it apparent that there was room at Chehalis for another bank. In that year the Commercial State Bank was incorporated in the city with a capital of $50,000 all paid up, by the following gentlemen: M. L. Holbrook, Wm. West, Jas. S. Greig, Jno. T. Newland and F. M. Wade. M. L. Holbrook was elected president and Jas. S. Greig cashier. This new institution has made very rapid strides since it was organized, ample evidence of the confidence it merits from the people. The surplus and undivided profits of the bank now amount to nearly $6,000 and the deposits average about $75,000. Both banks loan money liberally on good security, allow interest on time deposits and render such accommodations to their patrons as the wise administration of banking affairs will admit.

FIRST NATIONAL BANK, CHEHALIS.

PHOTO. BY R. SHEANE.



COMMERCIAL STATE BANK, CHEHALIS.

The industries of Chehalis in the line of manufacturing include the large sawmill of The Mealy-Lacy Co., the sash and door factory of Luedinghaus' Bros, Snyder & Frost's shingle mill, the Gates shingle mill, the Seymour shingle mill and the Chehalis flouring mill, the latter with a capacity of 60 barrels per day.

The forests of Lewis county supply all the logs used in the factories and mills at Chehalis, and even with the heavy united output of these plants many years of constant cutting will not materially affect this heavy supply.

The public improvements in Chehalis take a high rank among the cities of the same size on the coast. The public school of the city was erected, in 1888, at a cost of $12,000, and is admirably adapted to educational purposes. Professor J. T. Forrest, the principal, has inaugurated an excellent graded system in the school, and with his efficient corps of eight experienced teachers, he presides over a school of 500 bright and happy pupils of both sexes. A finely equipped electric light plant supplies Chehalis with both arc and incandescent lamps, the former being used for street lighting, and the latter in stores, factories and in the hotels. The people of Chehalis boast, with a pardonable degree of pride, of their efficient water system. Both in the quality of water supplied and in the pressure obtained, this system is certainly not excelled anywhere. The water is brought in flumes from the Newaukum river, seven miles distant, and by an ingenious combination of water-wheel and pump, at a point one and one quarter miles distant from the city, the water is thrown into a reservoir of 560,000 gallons capacity, and located on an eminence adjacent to Chehalis. The pressure obtained in the city mains is from 80 to 90 pounds to the square inch. Had these water works been completed at the time of the great fire in 1892, no such a disastrous conflagration as visited the town then would have been possible.

A glance at the varied interests, agricultural and mineral, of Lewis county, all of which is tributary to Chehalis, and must continue to be in the future, not only reveals the cause of the present prosperity of the city, but also supplies an argument for the continued growth of the place. Hops, hay and oats are the leading products of the soil of this section. Wheat thrives equally as well on the lands of the county, but the farmers of this section were not long in discovering that the first-named crops paid the best, and as a result wheat growing, as a leading industry on these lands, was abandoned in favor of the more profitable productions. Hops are raised in great abundance here, and of superior quality. They are grown on low, sandy soil, and the annual product of this staple, in Lewis county, is very large. Washington hops enjoy a deservedly high reputation in Eastern markets, and the Chehalis valley hops are graded with the best. Reliable reports place the product of hops on lands of the county at from three-fourths to one and one-half tons per acre, according to locality and the care exercised in cultivation. Fine hay crops are also the rule in this section, and yields of from one to two and one-half tons per acre of fine timothy are common here. In a period of 30 years crops have never been known to fail here.

Fruit growing is now attracting considerable attention in Lewis county. The uplands of the county are found well adapted for orchards of prune, plums, apples, pears and cherries and trees here, which have already reached a bearing age, are giving fine results, both in quality of fruit produced and the quantity of this same fruit.

The time is hardly ripe for any extended notice of the mineral resources of the county. It is certain, however, that valuable veins of precious metals and coal exist in the slopes of Mount St. Helens, and many claims have already been filed in this section with a view of their speedy development. The lumbering interests of the county and adjoining counties are now second to those of no other part of the Northwest. Many years must elapse before the billions of feet of yellow fir and cedar now standing in these forests can be exhausted.

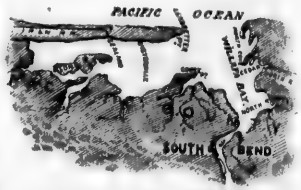
THE MEALY-LACY COMPANY.—The Mealy-Lacy Company, proprietors of the leading lumbering industry of Chehalis and its tributary section, is not a corporation, but a co-partnership, embracing the following membership: A. Mealy, F. C. Lacy, G. S. Lacy, C. Keeper, C. M. Mackintosh and R. W. Shotts. All of these gentlemen were, until recently, engaged in the lumbering business in Pennsylvania, and they brought with them to Washington the practical knowledge of the business which experience alone imparts. The moving causes which induced them to leave the Atlantic for the Pacific coast were the growing scarcity of the timber in the East, and the keen business sagacity which told them that now, if ever, the time had come to secure timber lands in the great North western timber belts. The Mealy-Lacy Company was formed in August, 1891, and the books of the company show that their output for the first 18 months they were in business was 4,500,000 feet of lumber. The plant of the company at Chehalis covers about 12 acres of land lying along the Chehalis river, and includes sawmills, dry-kilns and the best improved machinery for turning out rough and dressed lumber. They use both the kiln and air process for drying, but they prefer the latter for best results obtained.

PHOTO. BY R. SHEANE.

MILL BOOM, MEALY-LACY COMPANY, CHEHALIS.

Chehalis, at the present time, is worthy of the attention of manufacturers and capitalists. The manufacturing possibilities of the city are good, and the extent and richness of the tributary section will always support at this point a large and prosperous population.

South Bend, Washington.—South Bend, the seat of justice of Pacific county, Washington, and one of the principal cities of Southwestern Washington, is located near the mouth of the Willapa river, 18 miles distant from the Pacific ocean.



MAP OF WILLAPA BAY, WASHINGTON.

The commercial importance of the site on which South Bend is located was first recognized in 1889, at the time when attention was first diverted from Puget Sound, and increasing interest began to be manifested in the advantages of Southwestern Washington. Willapa Harbor, formerly known as Shoalwater Bay, has long been recognized as one of the best natural harbors in the United States. Satisfying themselves of this fact a large number of promoters and speculators at once began the search for an eligible townsite on its shores. In the fall of 1889, South Bend was platted. There were at that time about 150 people living in the vicinity of the proposed town, principally engaged in farming

and lumbering. From the beginning of 1890 South Bend entered upon an era of rapid growth. Capitalists and home seekers flocked to the new seaport in great numbers and as a result of this rapid inflow the United States census of March, 1890, accredited South Bend with a population of 836. This population has been largely increased since that time, and it is claimed today that the city contains at least 3,500 inhabitants.

PHOTO. BY A. GYLFE.

SCENE AT DOCKS, SOUTH BEND.

PHOTO. BY A. GYLFE.

FALLS OF PALIX RIVER, NEAR SOUTH BEND.

South Bend is located on Willapa river, 18 miles from the Pacific ocean. It is as a seaport that the city makes its chief claim to future importance. The Willapa river at this point is from 700 to 1,600 feet wide and has a depth varying from 22 to 38 feet at the lowest tide. This harbor offers safe anchorage to the largest ships afloat, and has ample accommodations for all the shipping that will ever visit the state of Washington. A deep and nearly straight channel leads from South Bend in the river, and through Willapa Harbor to the sea. There are two channel entrances into the bay from the ocean. These channels are shown by the government survey of 1891 to possess a depth of 18 and 22 feet respectively at low tide, with an average daily rise of 8 feet. Smooth water is found in these entrances in all weather and they offer safe and easy navigation.

PHOTO. BY GYLFE.

PUBLIC SCHOOL, SOUTH BEND.

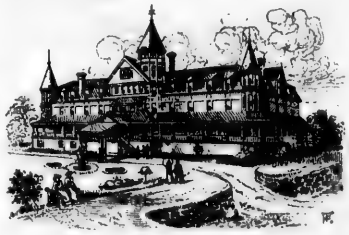
Its harbor advantages attracted the attention of the Northern Pacific Railroad Company to South Bend in 1890 and the company at once decided to make this point a Pacific ocean terminus of the road. A branch has since been constructed from the main line of the Northern Pacific at Chehalis to South Bend, a distance of 58 miles. This road was completed and thrown open to travel in the spring of 1893, thus affording direct all-rail communication between South Bend, all parts of Washington and Oregon, and the East. The Northern Pacific Railroad Company contemplates extending this line beyond Chehalis to North Yakima, thus affording facilities for the transportation the of wheat and other produce of Eastern Washington to South Bend. This will be a great saving in distance over the present circuitous route the road follows

PPOTO. BY GYLFE.

FRANKLIN BLOCK, SOUTH BEND.

to Puget Sound. South Bend is now also reached from Astoria by the I. R. & N. Co.'s line. This road runs from Ilwaco to Sealand. At the latter point connection is made with steamers for South Bend. Numerous vessels also ply regularly between South Bend and Astoria, Portland and San Francisco, thus affording a third route for reaching this prosperous point.

PHOTO. BY GYLFE.



HOTEL WILLAPA, SOUTH BEND.

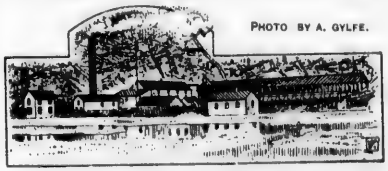
The building of a substantial city and the establishment of industries at South Bend have kept pace with its increase in population. The city now contains four banks, six hotels, two newspapers, and a large number of prosperous mercantile houses. The Hotel Willapa, intended to accommodate the tide of summer travel which flows annually to South Bend, was erected at a cost of $100,000. The Allbee, a handsome and well-equipped hotel, is open the year round, and it is highly spoken of by tourists. Comfortable rooms, a first-class table and careful attention to the wants of guests are recognized features of the house. The judicial seat of Pacific county was removed from Oysterville in 1893 to South Bend. Among the improvements contemplated at South Bend in the near future is the erection of a fine court house. The public school building here is a fine structure, erected at a cost of $10,000. Among the public improvements of the city may be mentioned miles of graded and planked streets, electric lights and an excellent system of water works. Religious services are conducted in seven churches of as many different denominations.

PHOTO. BY A. GYLFE.

"THE ALLBEE," SOUTH BEND, J. G. HEIM, PROPRIETOR.

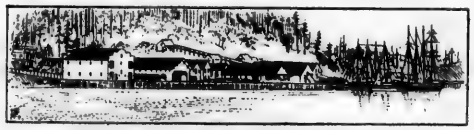
Manufacturing industries at South Bend are represented by the Willapa Harbor Tannin Extract Company, the Northwestern Lumber Company, two other large sawmills, a sash and door factory, a planing mill and a salmon cannery. The Willapa Harbor Tannin Extract Company is a new enterprise, but it has already established a substantial reputation and the demand for its products is rapidly increasing. The tannin produced by the company is considered superior to that heretofore brought into Washington from the East. The works are under the direct superintendence and management of Mr. T. Cooper. The Northwestern Lumber Company at South Bend is a large concern. It owns an extensive plant and wharfage facilities on the shores of the Willapa river. The headquarters of the company are at San Francisco and the resident manager at South Bend is Mr. R. B. Dyer. The immense annual output of the company is shipped principally to San Francisco. The wharf-

PHOTO BY A. GYLFE.



WILLAPA HARBOR TANNIN EXTRACT CO.'S PLANT, SOUTH BEND.

PHOTO. BY A. GYLFE.

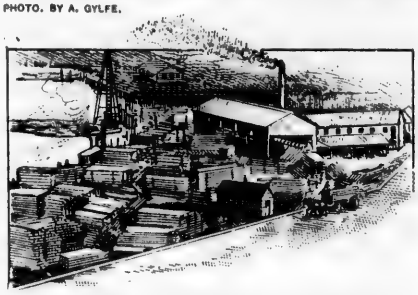


NORTHWESTERN LUMBER CO.'S MILLS, SOUTH BEND.

These former flats now form a most important part of the townsite. Directly tributary to South Bend is the rich Willapa valley, traversed by the railroad terminating here. This furnishes homes for a prosperous farming community. Parts of it are covered with a fine growth of heavy timber, and with its diversified resources it is one of the most inviting sections of Washington.

age facilities of South Bend along the Willapa river are ample for the accommodation of the large commerce which frequents the city. The harbor has recently been deepened by dredging at a cost of $500,000. The sand taken from the river bed was used to fill in and render available for building a large tract of tide land flats.

PHOTO. BY A. GYLFE.



PLANT, SOUTH BEND LUMBER & MFG. CO., SOUTH BEND.

Centralia, Washington.—Centralia is, as its name implies, a central city. This position is not fixed so much by geographical location as it is by the central position which the town occupies in the rich agricultural, timber and coal section of Southwestern Washington, and also by the right which the place justly claims to of being a railroad center of considerable importance. Centralia is on the main line of the Northern Pacific, 94 miles from Portland, and 51 miles from Tacoma. It is the diverging point for the two important lines of railroad, one running from Centralia to the coal mining center of Florence and the other running to Ocosta on Gray's Harbor. It is at Centralia that the Tacoma, Olympia & Chehalis Valley railroad connects with the main line of the Northern Pacific. Cars are now running out from Centralia over this new road as far as Florence coal mine, about five miles distant. It is the intention to push this line through to a connection with some important railroad line east of the Cascade Mountains at some time in the near future. In addition to the above roads now pass ing and centering at Centralia, the Union Pacific has secured the right of way for a line paralleling the Northern Pacific and running from Portland to the Sound, which line will make Centralia one of its important stations. Vast sums of money have already been expended on the roadbed of this new road, and the feeling is general that the line will be completed and in running order sometime in the near future. The

PHOTO. BY T. R. WILLIAMS.

CENTRALIA'S ONLY SCHOOL HOUSE. JANUARY 1, 1889.

PHOTO. BY T. R. WILLIAMS.

NORTH SCHOOL, CENTRALIA

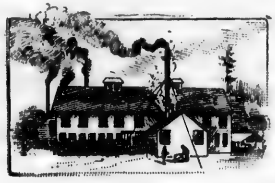
Great Northern, which now has its western terminus at Seattle, is reported as being very anxious to get to Portland, and it is not improbable that satisfactory arrangements may be made between the Great Northern and the Union Pacific to run the cars of both roads over the latter company's line between Portland and the Sound. Should this be brought about, Centralia will have the benefit of three transcontinental lines of road, thus affording this point unequaled passenger and freight accommodations. Two through passenger trains over the Northern Pacific and one local passenger train running between Portland and Tacoma, in addition to a passenger train from Chehalis to Seattle, are now run each way over the main line passing Centralia daily, and this service, together with the trains over the branch lines of road running out from this point, gives Centralia the appearance of a railroad center of considerable importance.

PHOTO. BY T. R. WILLIAMS.

H. STREET SCHOOL, CENTRALIA.

The pioneer settler on the site now occupied by Centralia was a colored man, who is still living, and who bears the distinguished name of the father of his country, George Washington. Born in Virginia in 1817, the principal aim of the young man was to escape beyond the limitations of the white man's control. His adventurous wanderings finally led him to the junction of the Chehalis and Skookumchuck rivers in Southwestern Washington. Here he took up a claim and settled down to hard work and finally to reap the benefits of affluence which a future civilization had in store for him at this point. George Washington is today one of the richest men in Lewis county. Somewhat bowed by age, he is a prominent figure on the streets of Centralia. He gives his principal attention to the collecting of his rents and looking after his large property interests, he keeps a horse and buggy for his own private use and he is today one of the most highly respected citizens of the place he has seen grow from nothing to a commercial center of considerable prominence. Another pioneer of Centralia is Henry Hanson, a native of York, England, who bought 40 acres of land at this point in 1882 for $1,000. This land is now city property and has made the owner of it rich beyond his fondest anticipations.

PHOTO. BY T. R. WILLIAMS.



IRON AND BRASS FOUNDRY, CENTRALIA.

The site on which Centralia is built is well adapted for the location of a city. It is level, and a gravel subsoil affords an easy and safe drainage. West of Centralia lies the fertile Chehalis valley, while stretching away to the south is the equally rich Salzer valley. These two valleys contain some of the richest land in the state of Washington. Back of Centralia grow the virgin forests of Lewis and Chehalis counties containing inexhaustible supplies of the finest timber. Logs from this timber belt are easily floated to the mills at Centralia on the waters of the Chehalis river passing this point.

PHOTO. BY T. R. WILLIAMS.

DENTON BLOCK, CENTRALIA.

Centralia dates its growth from 1889. In January of that year the population of the place was about 700. Centralia claims today a population from between 3,500 and 4,000, and ranks among the 10 largest cities of Washington. Tower avenue, the main business street of the city, is a long thoroughfare, lined on both sides with many handsome and substantial brick structures. Among these fine buildings may be mentioned the First National Bank, the Binkley block, the Ellsbury block, the Denton block and the Long block. Other equally as fine structures as the above are now in course of erection. The two well established banks at Centralia, the First National and the Bank of Commerce insure the financial standing of the city. The First National Bank of Centralia is the result of the amalgamation of the old Lewis County Bank, which was incorporated in 1889 with a capital of $50,000, and the First National Bank. When the Lewis County Bank was incorporated the deposits by noon of the first day the bank opened its doors to business amounted to $15,000. The First National Bank is today strongly entrenched in the confidence of the people of Centralia and Lewis county, and its business shows a steady growth with each successive year. The officers of the First National are: Chas. Gilchrist, president; Frank Hense, vice-president; and E. L. Bickford, cashier. The statement made by the bank in July of last year made the following showing: capital, $50,000; surplus, $4,000.

PHOTO. BY T. R. WILLIAMS.

ELLSBURY BLOCK, CENTRALIA.

PHOTO. BY T. R. WILLIAMS.

FIRST NATIONAL BANK BUILDING, CENTRALIA.

The educational facilities of Centralia are something unusual for a place of the age of the city. Centralia supports two good public schools which occupy two handsome and well appointed buildings, and the average daily attendance at these schools is over 700 pupils. The first public school was opened in Centralia in April, 1889, with an enrollment of 50 scholars. The school was held at that time in a little primitive building that was taxed beyond the accommodation afforded even the limited number of pupils in attendance. In addition to the good public schools, Centralia is the seat of the Grace Seminary, founded by the Baptists. The citizens of Centralia contributed $10,000 in cash and gave the building site to secure the location of this school at this point. The college occupies a handsome four-story building erected at a cost of $17,000 and it is complete in every particular for school purposes. The curricu-

PHOTO. BY T. R. WILLIAMS.

GRACE SEMINARY, CENTRALIA.

lum of this school includes both the normal and academic courses of study. Pupils leaving this school are fully prepared for either teaching or for business life, and they are sufficiently advanced to successfully pass the examination for a collegiate course. Music and art are also embraced in the curriculum of the school.

Centralia has a good water-works plant and also an efficient electric light plant. The hotel accommodations of the city have not been overlooked by the enterprising citizens. The Hotel Centralia, which is now under construction, will cost when completed and fully furnished between $25,000 and $30,000. It will contain all the improvements essential to comfort and luxury. The Park Hotel at Centralia, which is now run under the able management of Captain Robinson, was built by Col. Geo. H. Ellsbury and stands high for the excellence of its cuisine and for the attention paid to the requirements of its patrons.

PHOTO. BY T. R. WILLIAMS.

HOTEL CENTRALIA, CENTRALIA.
(FROM PLANS.)

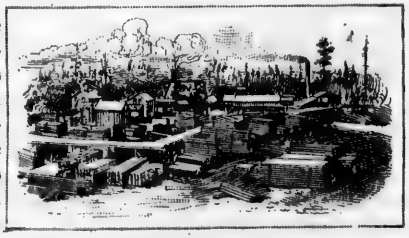
PHOTO. BY T. R. WILLIAMS.

PARK HOTEL, CENTRALIA.

Centralia is now the seat of a considerable coal industry. The Florence mine which yields a superior grade of bituminous coal lies about five miles east of Centralia. The output of this mine which amounted to 4,000 tons in 1892, is shipped from the mine to Centralia over the line of the Tacoma, Olympia & Chehalis Valley railroad and reshipped from this city to different points on the Northern Pacific railroad.

The industries of Centralia are numerous and diversified. These include lumber and shingle mills, brick yards, a brass and iron foundry and a furniture factory. The largest of these manufacturing plants are the two mills operated under the management of the Centralia Lumber Exchange, which is the combination of the interests of the two firms of Birge & Leitch and H. H. Martin & Son. The Exchange opened its office in Centralia in 1891, and its business is shared between the two companies which it represents. The joining of the interests of these old firms has led to excellent results. The value of the shipments made through the Exchange in 1892, in direct transactions with the jobbers, without the aid of agents, was $60,000. The Exchange is prepared to furnish all grades of lumber and shingles on short notice and keeps a large stock of these lines constantly on hand.

PHOTO. BY T. R. WILLIAMS.

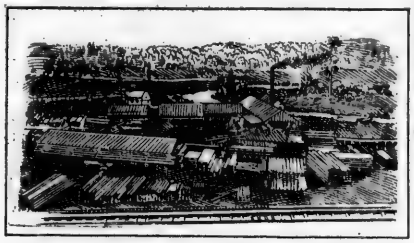


MILL, BIRGE & LEITCH, CENTRALIA.

The Birge & Leitch mill is located on the Chehalis river and its supply of logs is

floated down this stream and its tributaries. The capacity of the mill is 40,000 feet per day. The output of the mill for 1892, running 105 days, was 2,410,000 feet. H. H. Martin & Son run both saw and shingle mills. The capacity of the lumber mill of this company is 30,000 feet a day. The output of this mill for 1892, running 150 days, was 2,500,000 feet. The shingle plant of the company was started to running in November, 1892. It has a capacity of 90,000 shingles a day and the output up to January 1, 1893, reached 3,500,000. The shingle mill is located on the Skookumchuck river near its confluence with Hannaford creek. Mr. Martin states that there is sufficient A1 timber reached by the waters of this creek to keep his mill running constantly for 50 years in the future.

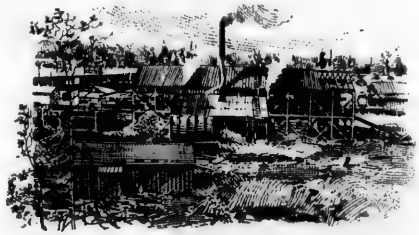
PHOTO. BY T. R. WILLIAMS.



H. H. MARTIN & SON'S MILL, CENTRALIA.

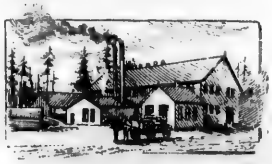
The Tower Lumber and Manufacturing Company's plant occupies a site along the track of the Northern Pacific railroad. George H. Ellsbury is president of the company, and George Davies is secretary. The capacity of the mill is 30,000 feet per day. The output for 1892 was 6,500,000 feet. This company now has a contract with the Northern Pacific to cut 30,000,000 feet of lumber on the lands of the latter corporation. The Centralia Furniture Company is the same establishment that was formerly located at Milwaukie, six miles above Portland. This company was induced to move their plant to Centralia by the offer of a liberal subsidy. The company does a large business, and is rarely without advance orders. Their annual pay-roll, outside of piece work, is between $12,000 and $13,000. Two brickyards do a flourishing business at Centralia. The clay found in the vicinity of Centralia is of a superior quality for brick-making. The fine brick blocks at this place were erected of brick made at the home yards, and these yards also supplied the brick used in the construction of the finest buildings of the Gray's Harbor towns. In addition to the manufacturing industries enumerated above, Centralia supports a number of smaller factories, all of which contribute largely to the prosperity of this most favorably located point.

PHOTO. T. R. WILLIAMS.



THE TOWER LUMBER AND MFG. CO., CENTRALIA.

PHOTO. BY T. R. WILLIAMS.



FURNITURE FACTORY, CENTRALIA.

The Gray's Harbor Country.—The large pear-shaped inlet, or bay, known as Gray's Harbor, is located on the southwest coast of Chehalis county, 90 miles south of Puget Sound, and about 40 miles north of the entrance to the Columbia river. Accident led to the discovery of Gray's Harbor about a century ago. Captain Robert Gray, of the ship Columbia, from Boston, a vessel engaged in the fur

trade, sighted the inlet to the harbor on April 7, 1792. He turned the prow of his ship towards the land and proudly sailed into the harbor. His entry on the log-book was to the effect that he found a commodious bay well sheltered from the sea by long sandbars and spits. He christened the bay Bullfinch Harbor, in honor of a friend. Subsequently, however, the inlet was named after its gallant discoverer, and it has since been known to the world as Gray's Harbor.

MAP, GRAY'S HARBOR.

The entrance to Gray's Harbor from the ocean is 1½ miles wide. The extreme length of the harbor is 18 miles, and its greatest width 14 miles. Old sea captains say that before the time antedating "appropriations," they considered Gray's Harbor a good haven to sail for in foul weather. The bay is almost completely landlocked, the narrow entrance alone affording ingress from the ocean. A ship at anchor in the harbor is as safe from the storms which beat outside of the heads as she would be in the Willamette at Portland. The area of the harbor approximates 100 square miles. The estimated anchorage area of the harbor is over 4,500 acres. An appropriation has recently been made by the government for the erection of a lighthouse at the entrance to Gray's Harbor, but so far not a dollar has been spent by the government for the improvement of this important inlet from the ocean.

Small steamers and lumber schooners of large tonnage now enter the harbor in all kinds of weather. These vessels run up as far as Cosmopolis, located on the Chehalis river, and at the high stages of water even as far inland as Montesano, the seat of Chehalis county. Practical and experienced seamen believe that the expenditure of $250,000 in improvements to the harbor would open it to vessels of the largest tonnage. The experiment of opening this harbor to vessels of the deepest draught, is worthy of at least a trial. The obstructions found in the harbor at the present time consist of a well defined bar at the entrance, and two minor bars inside the bay. Three larger channels carry the great body of water seeking an outlet to the ocean through Gray's Harbor—the north, south and middle channels. By confining the great flow of water to any one of these channels, on a principle easily understood by all practical engineers, a depth could be easily secured here that would float the very largest vessels. The Chehalis, Hoquiam, Wishkah, Humptulips, Charlies, Neuskahl, John's and Elk rivers all empty their waters into Gray's Harbor. These streams drain over 2,000 square miles of

PHOTO. BY PRATSCH & CO.

BIG TIMBER NEAR ABERDEEN.

territory, and the volume of water which they carry is sufficient, if properly directed, to remove all the bars in the harbor and to maintain at the entrance a depth of at least 30 feet at mean low tide.

PHOTO. BY PRATSCH & CO.

DENSE TIMBER NEAR ABERDEEN.

The vast area drained by the numerous streams pouring into Gray's Harbor is covered with a heavy growth of the finest fir, spruce, cedar, alder and hemlock timber. The wealth of the timber alone found in this district, is a sufficient claim on the government for the improvement of Gray's Harbor. The district has been settled since 1855, and it is today one of the richest parts of the state of Washington in the assured promises of future rapid and substantial growth. The country back of the harbor is not only rich in the resources of available timber alone, but it also contains thousands of acres of the finest agricultural land in the Northwest, which, when fully settled, will support a large and prosperous population.

Five towns are today located on the shores of Gray's Harbor and the banks of that part of the Chehalis river navigable for ocean-going vessels. These are Ocosta, Hoquiam, Aberdeen, Cosmopolis and Montesano. Each of these towns receives special mention in connection with the present article, and these notices of the individual settlements of the section, together with this introductory article on Gray's Harbor, will furnish the reader with a valuable fund of information on a part of the state of Washington that is certain to show a most substantial development during the next few years.

Montesano, Washington.—Montesano, the county seat of Chehalis county, Washington, possesses several decided advantages of location. In the many changes which must take place before the relative position of the leading and permanent cities of Washington can be once firmly settled, many advantages will doubtless be considered in favor of Montesano for a future large growth and solid prosperity.

The old settlement of Montesano [mountain of health] was first established on the opposite side of the Chehalis river from the present townsite in 1862. Later the present site of the city was discovered to be a better location for the establishment of a town, and in order to keep the county seat for the place the name Montesano was retained for the new town.

PHOTO. BY A. J. MERWIN.

RESIDENCE, C. N. BYLES, MONTESANO.

The townsite of the present city was first platted by C. N. Byles in 1882. Incorporation followed in 1883. The town made a steady though slow progress from this latter year until 1890, when the first important enterprise in Montesano's history was inaugurated. This was the completion of a lumber railroad to Montesano, which furnished an outlet for the rich timber belt of this district. The citizens subscribed a liberal subsidy to insure the choice of route in the location of this road, and its completion was found to be of incalculable benefit to the town. At a later period this line of road came into the possession of the Northern Pacific Railroad Company, and is now one of the most important feeders of the trunk line of the entire system.

The official census of 1890 placed the population of Montesano at over 1,700. The best informed citizens of Montesano claim today a population exceeding 2,000 for their city. This point is the head of navigation on the Chehalis river, and is really the highest point reached by water in the entire Gray's Harbor district. Vessels of large aggregate tonnage yearly land at Montesano's docks. The depth of water in the river up to this point will be greatly increased by future improvements, and this will always remain the farthest point inland to which ships can ascend and make connection with the land transportation lines centering at this place.

PHOTO BY A. J. MERWIN.

PUBLIC SCHOOL, MONTESANO.

Ships now regularly ply between Montesano and San Francisco, and also between Montesano and Portland. The water front of the town affords excellent opportunities for the location here of manufacturing plants. Thus early in the growth of the place a large number of factories are operated here. These include Stetson's mill, The Montesano Mill & Water Co.'s mill, The Montesano Sash & Door Factory, Ayer's Furniture Factory, The Montesano Tannery and two brick yards. The brick yards at Montesano are the most successful operated in Chehalis county. Promising as are the future possibilities of Montesano for shipping and manufacturing, the future of the place will be largely dependent upon the growth and increase in wealth of the rich tributary agricultural district. Very reliable estimates place the number of acres of good agricultural land in Chehalis county, of which Montesano occupies about the geographical center from east to west, at about 300,000. About 40,000 acres of this land are already in cultivation. The figures given below regarding the average yields are made from careful inquiries among the practical farmers of this section and can be accepted as reliable

PHOTO. BY A. J. MERWIN.

COURT HOUSE, MONTESANO.

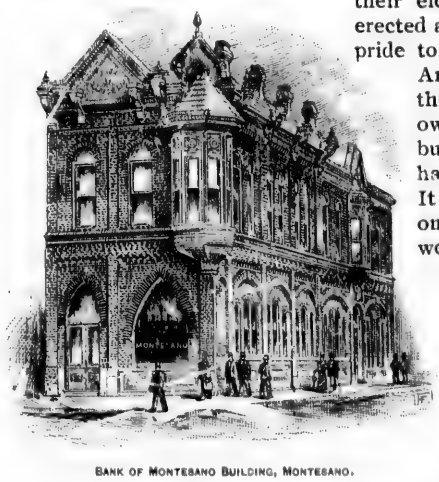
The average growth of hay on this land is about three tons to the acre. The yield per acre of the cereals is as follows: wheat, 35 bushels; oats, 60 bushels; barley, 54 bushels; peas, 48 bushels; rye, 40 bushels. The root crops and vegetables

make the following showing per acre: potatoes, 308½ bushels; carrots, 760 bushels; parsnips, 545 bushels; beets, 950 bushels; rutabagas, 1,050 bushels; turnips, 1,000 bushels, and all other vegetables do equally as well. Cabbages grown here have frequently been exhibited measuring three feet in diameter and weighing as high as 30 pounds. This soil is especially adapted to the growing of hops, and the yield of this product is about 1,800 pounds to the acre.

The lumber interests of the entire Gray's Harbor district are large, and are touched on to considerable extent in a separate article. The country immediately tributary to Montesano is rich in the finest supply of fir, spruce, cedar and hemlock, and cutting this timber into lumber is now (and it promises to make wonderful development in the future) one of the principal manufacturing industries of the place.

The growth of Montesano has been steady, but not at a pace beyond the possibilities of the town for self-support. The public improvements at Montesano are fully in keeping with the commercial prominence of the town. The streets are thoroughly lighted by electricity, and the local plant also supplies power for interior lighting by the incandescent system. The water-works system of the city is especially worthy of notice. The extraordinary pressure of 105 pounds to the square inch is maintained in the city's mains, while the pressure in the mains of the average water system varies from 90 to 100 pounds.

PHOTO. BY A. J. MERWIN.



BANK OF MONTESANO BUILDING, MONTESANO.

The people of Montesano are justly proud of their elegant public school building which was erected at a cost of $6,000. They also point with pride to the fine court house located at this point. Among the many other fine buildings of the city is the elegant edifice occupied and owned by the Bank of Montesano. This building cost $25,000 and is one of the handsomest structures in Chehalis county. It is occupied by the Bank of Montesano one of the oldest banking houses in Southwestern Washington. The Bank of Montesano is the outgrowth of the old banking house of Byles & Co., composed of C. N. Byles, of Montesano, and I. N. Case, of Astoria. Mr. Case is still a stockholder in the Bank of Montesano. The officers of the bank at the present writing are C. N. Byles, president; J. E. Metcalf, vice-president, and H. L. Gilkey, cashier. The financial statement of the bank is as follows: capital, $75,000; undivided profits, $8,000.

A strong banking house that is comparatively new here is the First National Bank of Montesano. This latter institution opened its doors to business in August, 1892. H. B. Marcy is president, Dr. F. L. Carr is vice-president, and J. P. Carson is cashier. The capital stock of the bank is $50,000; deposits, $35,892.12, and undivided profits, $1,987.93.

The assessed valuation of Montesano property today is about $1,000,000. As a city of homes the place is well worthy of mention. Among the many elegant private residences of the city, the illustration of the home of C. N. Byles, the pioneer founder of Montesano, is found especially worthy of publication in connection with the present article. The father and mother of Mr. Byles were the first settlers in the southwestern part of Washington who came direct to the territory from the East, their predecessors having reached Washington by way of the route through Oregon.

PHOTO BY A. J. MERWIN.

FIRST NATIONAL BANK, MONTESANO.

The sanitary conditions of Montesano are unsurpassed. The town is really built on a succession of three terraces rising one above the other, thus affording a natural and perfect system of drainage. The climate here is equable to a degree that can be said to be practically without sudden and great changes of temperature, and this, with the many avenues of wealth and prosperity which are open to the citizens of the place, will make Montesano, in the near future, one of the important cities of Southwestern Washington.

Cosmopolis, Washington.—Cosmopolis, a thriving little town of about 500 population, is located on the opposite side of the Chehalis river from Aberdeen, and a few miles further up the stream. The site is a good one for the location of a town. Cosmopolis has about one and one-half miles of water front, especially adapted to wharfage use. The Chehalis carries a depth of about 30 feet of water along this entire city frontage, with deep places in the river where the water attains a depth of 60 feet.

The Gray's Harbor Commercial Company is an important factor in the prosperity of Cosmopolis. The extensive lumber mill plant of this company is the only industry at the present time located at this point. In addition to their large sawmill the company also conducts at Cosmopolis a large general merchandise business They also operate a line of steamers, giving employment to several boats, on the river and harbor. The largest single day's output by the plant of the company at Cosmopolis during 1892 was 222,000 feet of lumber, which can be taken as an indication of the extent of this great industry at Cosmopolis. The company employs in its mill and store here over 100 men. Loafers and unemployed men are not found in this community. Cosmopolis has a pleasing air of thrift. A good public school building, erected at a cost of $4,500, and a fine city hall, which cost about $3,500, are claimed for the town. The place also has the advantages of a good water-works system and an efficient and well-conducted electric light plant. Cosmopolis is entirely free from debt. The foundation of the town is the solid one of manufacturing industry and legitimate trade and it presents every evidence of a substantial growth.

Aberdeen, Washington.—Aberdeen is both the center of a great industry and a shipping point of no mean importance. These two advantages in the hands of an enterprising population that is usually located in a coast town of any promi-

nence, can be made strong levers in lifting a town out of obscurity to a position of wealth and importance, and it may be stated here for the benefit of the outside world that Aberdeen's citizens have neither been derelict in the exercise of intelli-

PHOTO. BY P. F. FINCH.

VIEW OF ABERDEEN AND HARBOR.

gence in watching the interests of their town or in pushing it to the front as a coming place of importance on Gray's Harbor.

In 1855, Samuel Benn, the pioneer resident of Aberdeen, located a ranch on the site now occupied by the flourishing young city. Mr. Benn is still alive and is one of the best-known citizens of the town for whose birth he was responsible and whose interests he has done so much to advance. The townsite was platted in 1883 and contained at that time 45 blocks. The room provided for in the original plat was inadequate to meet the demands of the rapidly-growing population, and since that time additions to Aberdeen have been laid out until the site of the city proper now covers a considerable area. The place is compactly built and it has every appearance of a wide-awake and prosperous town.

The population of Aberdeen today is about 2,000. The county census taken in the spring of 1892 showed 1,860 actual residents within the precincts of Aberdeen, and the vote polled in the fall of the same year at the town was 514. The population of 2,000 for Aberdeen at the present writing is made on a conservative basis.

PHOTO BY PRATSCH & CO.

MAIN STREET, ABERDEEN.

It was a wise foresight which chose the site of Aberdeen, located as it is at the junction of the Chehalis and Wishkah rivers, near the point where the latter stream enters Gray's Harbor. The harbor at Aberdeen is land-locked, and the depth of water on both sides of the town is sufficient to float the largest vessels. The Chehalis river at this point is 2,700 feet wide and maintains an average depth in front of the town of over 30 feet. The Wishkah river, which bisects the town, is 200 feet wide at this point, and at high tide carries a depth of about 30 feet of water for some distance from its mouth. These two deep-water frontages afford ample wharfage facilities for the shipping of Gray's Harbor, and the depth of water is such that vessels of any tonnage will always be able to reach the docks here without the least difficulty.

Some time since the enterprising citizens of Aberdeen constructed and are now operating a well-equipped water-works system and also an electric light plant. In this line of improvement they also erected a handsome public school building on a sightly knoll in the city limits. This building, including cost of furnishing, represents a total outlay of $29,000. The best residence portion of the place is what is known as North Aberdeen, where some very elegant private residences have already been constructed. The air of both the business district and the residence portion of the town breathes of prosperity, and Aberdeen bears every evidence of a wealthy and progressive community.

PHOTO. BY PRATSCH & CO.

HIGH SCHOOL, ABERDEEN.

On the Pacific coast there are but five indentations, exclusive of Coos Bay, from the ocean which form easy and safe anchorage for shipping of large tonnage. Among the most important of these harbors, outside of Coos Bay, the Columbia river and Puget Sound, is Gray's Harbor, on which Aberdeen is located. The country back of this harbor is rich in all the varied products of forests, mines and soil, and it is capable of supporting a large and dense population. Gray's Harbor, without government improvements, is now entered by vessels of deep draught, and it is the seat of large shipping interests. Regular lines of vessels ply between Aberdeen and all coast ports, including Portland, the points on Puget Sound and San Francisco. In 1892 161 sailing vessels and 55 steamers left Aberdeen's wharves, a great advance in the tonnage which came to this port during the previous year. In addition to the finest of facilities for shipping by water enjoyed by Aberdeen, the town is within easy communicating distance of the regular passenger and freight trains of the Northern Pacific Railroad Company, whose line is now completed to that part of the town lying along the south shore of Gray's Harbor, connecting with all parts of the United States. It is hoped that by the time this book is ready for the press, the cars of this road will be running along the north shore of the harbor on which Aberdeen is located.

PHOTO BY PRATSCH & CO.

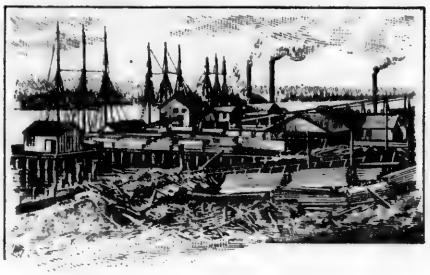
SALMON INDUSTRY, ABERDEEN.

The most important industry at Aberdeen, today, is the sawing of lumber. The people of the Gray's Harbor district claim, and it would seem with some little justice, a part of the wheat shipments of the rich Palouse, Big Bend and Potlatch sections of Eastern Washington and Idaho, which now find an outlet at Puget Sound and Portland. On the consummation of the railroad enterprises now on foot, which will advance the interests of the entire Gray's Harbor country, the prediction is doubtless a safe one that Aber-

deen, in time, will become an important shipping point for a part of the wheat and other rich crops of the great state of Washington.

The Michigan Lumber Company, of Aberdeen, is authority for the statement that there is no finer or more accessible belt of merchantable timber on the coast than is found along the numerous streams which form the water-courses of the Gray's Harbor district. Magnificent forests of fir, cedar, spruce and hemlock of colossal growth, can be easily floated to the mills at Aberdeen. A conservative estimate of the extent of this timber belt places the measurement of lumber at 180,000,000,000 feet. The coast, South American and Australian demand for this lumber is even now great, and with the increased demands for lumber which are constantly being made in all parts of the world, the great belt of the finest timber within easy reach of the sawmills at Aberdeen will not long remain untouched.

PHOTO. BY PRATSCH & CO.



THE J. M. WEATHERWAX LUMBER CO.'S SAWMILL, ABERDEEN.

There are now located at Aberdeen three large sawmills. The output of these mills for 1892 was as follows: The J. M. Weatherwax mill, 22,500,000 feet; the West mill, 10,000,000 feet, and the Wilson mill, 6,800,000. The output of the four large shingle mills located at Aberdeen aggregated, for the first six months of the year, 68,100,000 shingles.

In addition to the lumber and shingle mills at Aberdeen, there are also located at this point a large sash, door and box factory, operated by Whitehouse, Crimins & Co., and a factory devoted to the manufacture of furniture and fixtures, operated by A. Damitio. Aberdeen would furnish an advantageous site for the establishment of a paper mill, as the fibrous spruce timber which is found in inexhaustible quantities in this section is especially adapted to the manufacture of wood pulp. Aberdeen would also furnish an excellent site for the establishment of tanneries on a large scale, as the finest hemlock used in this industry can be obtained in any quantity desired, at this point, at a minimum cost.

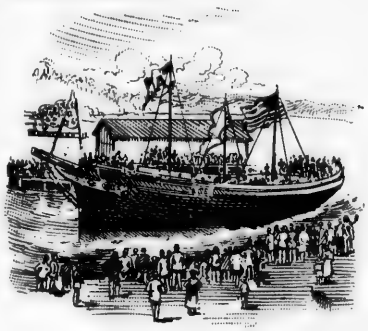
PHOTO. BY PRATSCH & CO.

MILL BOOM, J. M. WEATHERWAX LUMBER CO., ABERDEEN.

The J. M. Weatherwax Lumber Company have already presented the strongest possible argument in favor of Aberdeen as a most favorably located point for shipbuilding on a large scale, by constructing, at their mill yards, a staunch schooner, which is now engaged in the coast trade. This vessel was launched at Aberdeen, amid the enthusiastic rejoicings of the citizens of the place. This vessel is one of the largest and best appointed boats

of her kind ever built on the coast. She has a carrying capacity of 550,000 feet of lumber, and is both a matter of pride and a standing advertisement for the entire Gray's Harbor section of county.

PHOTO. BY PRATSCH & CO.



LAUNCH OF THE J. M. WEATHERWAX, ABERDEEN.

With the expenditure of a reasonable appropriation for improvement, Gray's Harbor can be made to rank with even the Columbia river or Puget Sound as an accessible harbor for the largest shipping. With the constantly increasing importance of the shipping interests of this section, congress will doubtless be willing, before many years have passed, to make the improvements needed at Gray's Harbor to cause it to equal any of the finest harbors on the coast, both in ease of access and in depth of water.

PHOTO. BY PRATSCH & CO.

ST. JOSEPH'S HOSPITAL, ABERDEEN.

An institution located at Aberdeen that is a great source of pride to the people of that town is the fine hospital conducted under the auspices of the Catholic Sisters. Two strong local banks, the Aberdeen Bank and First National, each with a capital of $50,000, carry sufficient money at all times to meet the legitimate demands of the people here. The mercantile interests are well represented at this point and the number of stores is constantly increasing with the growth in population and wealth of the town.

Hoquiam, Washington.—Hoquiam, an enterprising town of 1,150 inhabitants, is situated on the north side of Gray's Harbor, 19 miles from the bar at the entrance. The town sprung into existence at the time of the establishment of the Northwestern Lumber Co.'s mill at this point in 1882. For years previous to that time Hoquiam had been known as a place of considerable industry, but was designated with other points of the section simply as a "sawmill town."

In 1890, when the first authentic information of early connection of Gray's Harbor with the outside world by rail reached the people of the older settled communities of the coast, Hoquiam took a new lease of life and the growth of the place from that time forward was rapid and of a substantial nature. The population of Hoquiam in 1889 did not exceed 400; today the population of the town is no less than 1,200 and this population is constantly increasing.

The location of Hoquiam at the mouth of the Hoquiam river and also on the deep-water frontage of Gray's Harbor is favorable. The best of wharfage facilities for shipping are afforded at this point, and anchorage in the harbor in front of the city is both safe and easy. The Hoquiam river runs between unusually steep banks and it carries a depth of 30 feet of water from the point where it joins the waters

of Gray's Harbor for a distance of three miles inland. While it is navigable for deep-water vessels but for this latter distance above Hoquiam, steamers of light draught ascend the stream for a distance of 10 miles above the deep-water shipping point.

The people of Hoquiam express a confidence, that with the growth of that part of Southwestern Washington bordering on Gray's Harbor, Hoquiam will become one of the important maritime towns of this part of the state. It is already the seat of considerable manufacturing, and these industries are constantly increasing. The Northwestern Lumber Company's mill is one of the best equipped lumber plants in the state. When run to its full capacity this mill can cut about 31,000,000 feet of lumber annually. Slade's mill, as it is now known to the people of Gray's Harbor, and conducted by Mr. Kellogg, of Aberdeen, is the second largest industry of Hoquiam. A site has been purchased and the machinery is now on the way from San Francisco for the establishment at Hoquiam of a large basket factory. Mr. Carlson, who will be the resident manager of the latter company, will look to Portland principally as a market for his product.

Hoquiam has good hotel accommodations in the Hotel Hoquiam, a very creditable structure for a town of 1,200 population. It is well conducted and is the pride of the citizens of the place.

Excellent hunting and fishing are found within easy distance of Hoquiam. The streams which join the waters of the Hoquiam river within an easy walk of the town teem with trout, there is good salt-water fishing in the harbor, and the adjoining hills furnish fine sport for elk, bear and deer shooting. During the season the lakes in the vicinity of the town are covered with ducks, including mallards, canvas-back, teal, etc., as well as geese and swan, the shooting of which furnishes excellent sport for the hunters of water fowl.

Ocosta, Washington.—"Ocosta by the Sea." This is the somewhat poetic designation given to Ocosta by its enthusiastic and romantic citizens. Of the right of the citizens' claim to this title for their town no one is disposed to contend. On entering Gray's Harbor from the sea, Ocosta on South Bay is the first town sighted, and it is the last on which the gaze of the outgoing mariner lingers as his vessel speeds seaward. South Bay and a narrow strip of land in shape something like the index finger alone separate the town from the waters of the ocean itself.

It was not a reliance on picturesque surroundings alone that created Ocosta. The management of the Northern Pacific Railroad Company in their search for an ocean terminus for their line on Gray's Harbor favored Ocosta with the choice. J. W. Kendrick, chief engineer of the road, made the preliminary surveys for the line, skirting the shores of Gray's Harbor, and apparently having satisfied himself fully of the advantages of Ocosta, selected this place as the terminal point. The Gray's Harbor branch of the Northern Pacific was completed to Ocosta in June, 1892. The completion of the road to this point found a good-sized town awaiting the arrival of the iron horse, and since the driving of the last spike the town has made considerable advancement in a material way.

The population of Ocosta today is perhaps about 500. A sawmill and flouring mill are already located at this point and other manufacturing industries are contemplated. Liberal subsidies have been offered at Ocosta for the establishment of factories, which can be taken as an indication of the wide-awake policy of the place.

Several mills are located in the vicinity, industries that add directly to the prosperity of the place. The town claims one brewery whose product finds a large sale in the vicinity,

Ocosta is still too young to own a street-lighting plant and water works, but perfection of plans for the establishment of these important industries in municipal development will doubtless soon be considered by the enterprising people at this point.

The shooting of fine mallard, canvas-back, sprig and teal ducks affords fine sport on South Bay in front of Ocosta, and these ducks are exceedingly palatable. They are, singularly, entirely free from the rank, fishy taste which taints the flesh of nearly all fowl killed on salt water. Visitors to the bay are served in truly royal style with the fattest of ducks browned to a turn, and the rule at all of the public houses of the section is "a duck apiece for every guest." The people of Ocosta never do things by halves, and they place implicit reliance in the knowledge of carving, which every enlightened man is supposed to possess, by making no attempt to cut a duck for a man who is hungry enough to eat a whole one.

Bucoda, Washington.—Bucoda is an important town in Thurston county, on the main line of the Northern Pacific, about 20 miles south of Olympia, five miles south of Tenino, the junction of the main line of the Northern Pacific and the Port Townsend Southern branch to Olympia. It is 43 miles south of Tacoma and 102 miles north of Portland. The population of Bucoda by the U. S. official census of 1890 was 945. The principal reliance of the town for support is the large mine of the Bucoda Coal Company, located at this point. This mine has a daily capacity of 500 tons and large shipments of this coal are made regularly from Bucoda to Portland and other points on the line of the Northern Pacific. Immense deposits of lignite coal are found in the immediate vicinity of Bucoda and the mining of this coal will always be one of the leading industries here.

WATER POWER, BUCODA.

Bucoda contains one bank with $25,000 capital, a fine school house the erection of which involved an outlay of $6,000, a good opera house with a seating capacity of 400, it supports one good weekly newspaper and two churches, the Methodist and Baptist. One large sawmill and a shingle mill are located at this point. Along Skamokawa creek in the vicinity of Bucoda several companies are engaged extensively in logging, vast forests of the finest fir and cedar being directly tributary to the place. Good agricultural land is also found in large bodies near the town. Bucoda is a well built town, it contains a number of good stores and well constructed private residences and it is perhaps one of the largest interior shipping points of the Northern Pacific railroad in Western Washington.

Olympia, Washington.—Olympia, the capital of the state of Washington, and the county seat of Thurston county, is located at the head of Puget Sound, on an arm of this great inland body of water known as Budd's Inlet. The Sound is navigable for deep-water vessels to this point.

PHOTO. BY ROGERS.

OLYMPIA, LOOKING DOWN THE SOUND.

The old Smith land claim was located in 1846, and the present site of Olympia was formally dedicated as a townsite in 1850. The town was christened Olympia, by Colonel I. N. Ebey, a name suggested by the snow-capped peaks of the Olympic range, which rise abruptly to the north, and also by a happy recurrence at the time to the following lines of poetry:

"Afar their crystal summits rise
Like gems against the sunset skies,
While far below the shadowy mist,
In waves of pearl and amethyst,
'Round stately fir and sombre pine,
Its dewey-jeweled fingers twine;
Olympia's gods might view with grace
Nor scorn so fair a dwelling place."

PHOTO. BY ROGERS.

MAIN STREET, OLYMPIA.

Olympia is a beautiful city, both in the site it occupies and in its surroundings. The broad stretch of the waters of Puget Sound spreading out before the city, with its constantly moving shipping forms a changing panorama that claims the attention of all visitors to Washington's capital. The skirting forests and towering hills back of the place set off to good advantage a picture that is as rich in colors as only nature in her happiest mood can paint them. The beauty in location doubtless had something to do in determining the selection of Olympia as the state capital, and the growth of the place is, in a measure, due to these same beautiful surroundings.

For many years after the era of railroads in the Northwest, the growth of Olympia, in comparison with the other large cities of the Sound district, was slow. During the past few years, however, much substantial improvement has been made at this point, and Olympia now occupies a position of considerable commercial importance. During this time a number of very handsome public buildings have been erected here, and the numerous fine brick blocks on Main street attest the confidence of Olympia's citizens in the future growth of their city. The Thurston county court house, recently built at Olympia, is one of the handsomest public buildings in thest ate. It is built entirely of Bellingham Bay blue sandstone, and in point of construction and as a handsome piece of architecture, it outshines any county court house in Washington or Oregon today. The cost of this magnificent building was

PHOTO. BY ROGERS.

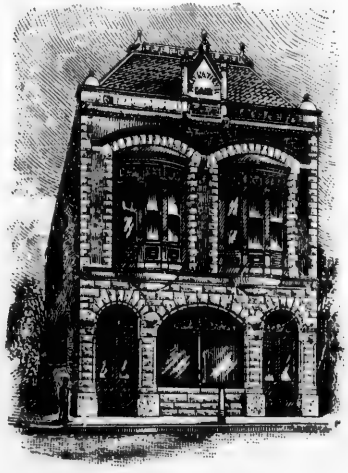
THURSTON COUNTY COURT HOUSE, OLYMPIA.

$140,000. The four stories of the building furnish ample room for the various county officers and for the halls of justice. The interior finishing is in keeping with the very handsome appearance of the exterior. Surmounting the structure is a lofty octagon-shaped tower. In each of the eight faces of this tower is placed a large clock dial, and this clock furnishes a correct timepiece for all Olympia. In addition to the magnificent court house, Olympia has two elegant brick and stone school buildings. The regular daily attendance at the public schools of the city is about 1,500. In addition to the fine public schools, the Collegiate Institute, under the auspices of the Methodist Episcopal church, and the Providence Academy, conducted by the sisters, are located at this point.

Private enterprise has not been remiss in furthering Olympia's interests. The McKenny block, the Chilberg block, the First National Bank building, the Hotel Olympia, the opera-house block and other fine structures have all been erected here during the past two years. Noticeable among these fine buildings is the McKenny block, located on the corner of Fourth and Main streets. This was erected in 1890 by Mr. T. I. McKenny, at a cost of $80,000. It is four stories in height, and has a frontage of 60 feet on Main street, with a depth extending back on Fourth street of 120 feet. The material used in its construction is brick, with massive stone trimmings, and it presents to the eye every appearance of solidity and grace of outline. The finely finished woodwork of the interior of the building vies with the best interior finishing of any of the finest buildings of the Northwest. The building is well heated, and every attention has been paid to perfect lighting. The three upper stories of the McKenny block are now occupied by the various state departments of Washington, pending the erection of the capitol at Olympia. The state pays $6,600 a year for these quarters, and the stores on the ground floor bring the owner $5,000 a year more. The erection of such fine structures at Olympia, as the McKenny block, marks an epoch in the growth of the city, and it was just such enterprise as was shown in putting up this building here that so often crowds places less favored in location than Olympia to the front.

McKENNY BLOCK, OLYMPIA.

PHOTO. BY ROGERS.



FIRST NATIONAL BANK, OLYMPIA.

Two strong banks are located at Olympia, the First National and the Capital National Bank. The First National is the oldest national bank in the city, having been established in 1884. It is the outgrowth of the old banking

firm of George A. Barnes & Co., afterwards merged into the business of Hoyt, Phillips & Co. The directors of the First National having determined to erect a building suitable for the requirements of the bank, finally accepted the plans of the present structure which they occupy. The building now occupied by the First National is a model of the tasteful in architecture, and it is elegant in design. The foundation is of stone, and the two-story superstructure is composed of brick with stone trimmings and terra cotta facade. Although the building is only 30x90 feet in size, its erection involved an outlay of $20,000, as no expense was spared by the bank either in the exterior or interior finish. The present officers of the First National are as follows: president, A. A. Phillips; vice-president, John F. Gowey; cashier, L. W. Ostrander; assistant cashier, Henry P. Lee. The following is the report of the condition of the First National Bank of Olympia, Washington, at close of business July 12, 1893: Resources—Loans and discounts, $261,275.68; overdrafts, $154.66; United States bonds to secure circulation, $25,000; premiums paid, $850; real estate, furniture and fixtures, $42,533.40; current expenses and taxes paid, $6,996.85; cash on hand, $43,907.41; due from banks, $22,925.99; due from United States treasury, $1,125; total, $404,768.99. Liabilities—Capital stock paid in, $100,000; surplus, $35,000; undivided profits, $12,919.25; circulation, $22,500; deposits, $234,349.74; total, $404,768.99.

PHOTO. BY ROGERS.

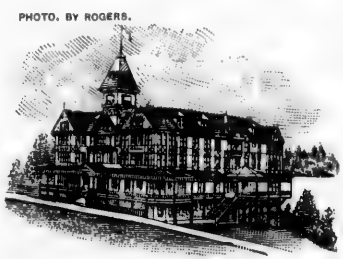
LINCOLN SCHOOL, OLYMPIA.

PHOTO. BY ROGERS.

ST PETER'S HOSPITAL, OLYMPIA.

Among the leading industrial establishments of Olympia may be mentioned the Olympia Door and Lumber Company, the West Side Mill and the Puget Sound Pipe Company. The present population of the city is about 6,000. A large proportion of the citizens own their own homes. Some of the finest of these private residences are perched on a high hill which commands a fine view of the business district of the city, and also of the entire bay in front. A number of very fine residences are also located on the west shore, opposite the main part of the city. A long bridge, spanning the inlet intervening, connects with the business part of the town. On the hill, which furnishes a site for some of the finest residences, is located St. Peter's hospital, erected at a cost of $20,000. It is in charge of the Catholic Sisters.

PHOTO. BY ROGERS.



HOTEL OLYMPIA, OLYMPIA.

Extensive improvements are now being made to the harbor at Olympia, under the direction of the government, which made an appropriation of $35,000 for this purpose. This improvement is badly needed, as the water formerly became so shallow at the city's docks, during low tide, that it was difficult for deep-water vessels to approach these landings. The expenditure of this money on harbor improvements here, however, will entirely remedy this trouble. The Northern Pacific Railroad Company now runs daily trains south from Olympia to Portland, north to Seattle and Tacoma, and east and southwest to the lower Chehalis valley and to Gray's Harbor by connection at Centralia. Connection between Olympia and Tenino, a dis-

tance of 15 miles, is made by the Port Townsend & Southern. The steamer Multnomah makes round trips daily between Olympia and Seattle, touching both ways at Tacoma. The steamer Willie plies between Olympia and Shelton, making two round trips between these points daily. Olympia now has as good transportation facilities as any city on the Sound, and these facilities are being constantly improved.

By an act of congress the state of Washington was endowed with a donation of 132,000 acres of land when the state was created. The proceeds of this land were to be devoted to the erection of suitable capitol buildings. As the value of this land is now estimated to be about $2,500,000, the erection of fine state buildings at Olympia, in the near future, is assured, and it is probable when the time comes to build these fine edifices for state purposes, that special attention will be paid to making them the most creditable public buildings on the coast.

PHOTO. BY ROGERS.

YOUNG'S HOTEL, OLYMPIA

YOUNG'S HOTEL.—Among the historic landmarks of Olympia spared by the effacing ravages of time, Young's hotel, on the corner of Second and Main streets, is worthy of special mention. The building now occupied by the hotel was finished away back in 1849, and under its original name of the Washington hotel attained a degree of celebrity in the early 50's, still remembered by the pioneer settlers of Olympia and Tumwater. It was the first house of refreshment in the capital city and for a long time after its erection the only one. Its patrons embraced the names of all the public men famous in the formative period of the territorial government of Washington. Many of these old patrons of the Washington hotel have long since paid their last debt to nature, leaving behind them nothing but a shadowy memory of their accomplishments on earth, but not a few still survive to recall the old-time discussions to which the walls of the Washington once echoed; discussions on topics then instinct with life but today so long since forgotten that even an argument on the *pros* and *cons* of African slavery would sound recent and fresh by comparison. In 1873 the old Washington hotel passed into the hands of E. T. Young and its name was changed by the new proprietor to Young's hotel. The house has been enlarged from time to time under Mr. Young's proprietorship, and today it is capable of entertaining 120 guests. It has lost none of its old-time popularity in the hands of E. T. Young, who is an ex-mayor of Olympia, and who for many years was a prominent member of the common council of the city. Large, well-ventilated rooms, fine brands of wines, liquors and cigars, sample rooms for commercial travelers and all the old-time attention to comfort of guests still make Young's hotel a drawing card with the general public.

Tumwater, Washington.—Tumwater, a suburb of Olympia, enjoys the distinction of having been the first settlement in the Puget Sound country. It is located on the Des Chutes river, about 1½ miles south of Olympia, and is connected with the big city by an electric railway line. The town enjoys the benefits of a vast water power in Tumwater falls, which lend their unceasing roar to the business life of the place. Power for operating the electric line and also for running the street-lighting plant at Olympia is obtained from these falls. The power of the falls wa

formerly utilized for running a large flouring mill at Tumwater, but a disastrous fire in 1892 destroyed the plant, and owing to general depression in business the mill has not yet been rebuilt. The falls here are formed by the entire body of the Des Chutes river plunging over rocky ledges at this point, making a total descent of 82 feet. The different falls are three in number, making a perpendicular fall of 20, 16 and 26 feet respectively. Rapids intervene between each fall. The short-sighted policy of the original owners of the water power at this point greatly retarded what would otherwise have been a great development at Tumwater. This is one of the most available and most easily controlled water powers of the state and it will some day be the scene of considerable activity in manufacturing development.

Tumwater contains today about 500 people, many of the residents doing business in Olympia. It is on the line of the Port Townsend & Southern railway running between Olympia and Tenino, and it is also on the direct line of the proposed Union Pacific line between Portland and Puget Sound. It is a favorably located point for building a prosperous town at some time in the future.

Shelton, Washington.—Shelton, the judicial seat of Mason county, is located on the arm of Puget Sound known as Hammerton's Inlet. Almost all of Mason county's area, consisting of 900 square miles, is mountainous and is covered with vast forests of fir, pine and cedar. Millions of feet of lumber are now annually logged in this county and floated in rafts to the different seats of the sawmill industry on Puget Sound. Shelton is practically the center of this great logging industry and it is the supply station of the various logging camps located in the county.

The present population of Shelton is about 600. The greater part of the population is engaged in the service of the lumber corporations having interests at this point. Two logging railroads are operated in Mason county with Shelton as the terminus. The Washington & Southern Railway Company operates about 36 miles of railroad, including side-tracks, in the county, and the Shelton & Southwestern Railway Company has now laid about nine miles of road. This latter company expects to extend its road to an ultimate connection with the Gray's Harbor branch of the Northern Pacific at Elma. The extension of this road will prove of great benefit to Shelton, as it will open up all-rail communication between the town and all parts of the country. Shelton is 22 miles northwest of Olympia, from which point it is reached by steamboat which makes two round trips a day between the two places.

Tacoma, Washington.—Tacoma, the chief industrial city and the most important seaport of Washington, is located on that part of the headwaters of Puget Sound known as Commencement Bay. This bay is an indentation of Admiralty Inlet, the largest and most important branch of Puget Sound.

PHOTO. BY FRENCH.

FIRST POSTOFFICE IN TACOMA.

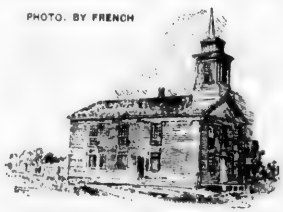
The rapid rise of Tacoma from mere village conditions to the position of one of the most progressive cities of the coast makes it one of the remarkable cities of modern times. The record of this marvelous growth accurately portrayed in words backed by statistics, cannot fail to be of great interest to the readers of "The Handbook."

The great inland sea called Puget Sound, with its forest-lined shores shadowed by the mighty peaks of the Cascade and Olympic Mountains, remained practically an unknown region until early in the 50's, when a few hardy pioneers cut their way through the dense forests and established a settlement on the shores of Elliot Bay, the present site of the flourishing city of Seattle. Occasionally, before that time, a venturesome ship with a foreign flag flying at its mast head had sailed through the Straits of Fuca into Puget Sound in search of spars and timber. The crews of these ships doubtless told in distant lands that far to the westward lay a beautiful inland body of water bluer than the Aegean Sea. But even the stories of Puget Sound, embellished by a sailor's vivid imagination, could hardly do the region justice. No other section of equal extent in the world contains as much natural wealth as does the country bordering on Puget Sound. Embraced in this region is the greatest forest on the continent, the most extensive coal measures in the United States, millions of acres of fertile land, and mountains that contain enormous deposits of gold, silver, copper, lead and iron-bearing ores. Stretching back from the water's edge at Tacoma to the foothills of the mountain peaks, covered with perennial snow, is a vast forest, the monarchs of which lift their green-crowned heads as high as 400 feet above the ground. Beyond this forest, and towering to a height of nearly 15,000 feet is a great white glacier-covered dome which bears the Indian name of Tacoma. Beneath the summit of Mount Tacoma and extending away for miles until lost to the view of the beholder, is a series of snow-capped peaks of the Cascade Mountains. Trickling down the mountain sides are hundreds of little creeks which finally unite and form the several rivers which empty into Puget Sound. One of these rivers, the Puyallup, flows through an exceptionally fertile valley and enters Commencement Bay in front of the city of Tacoma. In the valley of this river are the most productive hop fields in the world, surpassing in almost every respect the famous hop yards of Kent, England.

PHOTO. BY FRENCH.

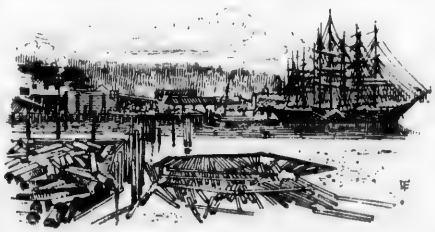
AN HISTORIC CHURCH, TACOMA.

PHOTO. BY FRENCH



OLDEST CHURCH ON PUGET SOUND. BUILT BY REV. DE VORE IN 1852.

It is not to be wondered at that when men learned of the fertility of the soil of this region, its matchless resources and mild and salubrious climate they were willing to suffer privations and undertake long hazardous journeys to reach the shores of Puget Sound. The location of Tacoma, the birth of the present city, and its foundation date from 1868, when General Matthew M. McCarver, a well-known California pioneer, arrived on Puget Sound, and platted about 60 acres on what is now called the original townsite of Tacoma. In the same year Charles Hanson built the Tacoma mill. For 15 years or more this sawmill was practically the main support and the only industry



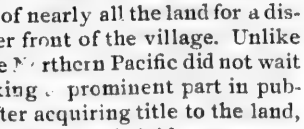
SAWMILL SCENE AT TACOMA.

PHOTO. BY FRENCH.

INDIAN CANOES AT TACOMA.

of the village. It is now one of the largest sawmills in the United States. At its docks can be seen vessels hailing from all ports of the Pacific and Atlantic oceans. In the early years of the settlement of Tacoma, a boat arriving at this mill from some outside port was welcomed by the entire population of the village.

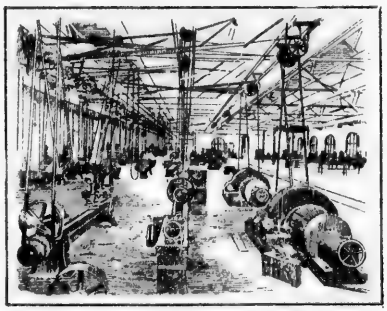
Tacoma remained a comparatively unknown town until 1873. Up to that time the prediction that Tacoma would ever contain a population of 1,000 people would not have been considered by any resident of the place. In 1873 an event occurred that not only amazed the people of the village but which also made Tacoma a place of great promise. In that year Tacoma was selected and put down on the maps as the western terminus of the Northern Pacific railroad. Before this selection was announced the company had quietly acquired possession of nearly all the land for a distance of two or three miles back from and along the water front of the village. Unlike many speculators the men who at that time controlled the Northern Pacific did not wait until some one else had made improvements before taking a prominent part in public matters themselves. They at once went to work, after acquiring title to the land, felling the mighty forests, and among the stumps and underbrush laid out wide business streets and residence avenues. It was the purpose of the Northern Pacific to establish here a large and beautiful city, and although the project was delayed for some years, it was subsequently carried out on a much larger scale than was first contemplated. The delay in building the city was caused by the Cascade Mountains presenting a seemingly impassable barrier to the pathway of the railroad to Puget Sound. The mountains turned the line of road to the south so that in reaching the Pacific ocean it was forced to make connection with the Oregon Railway & Navigation Company's line down the Columbia river to Portland. In 1888, however, skillful engineering demonstrated that the road could be built over and through the Cascades. The great Stampede tunnel was subsequently built and the Northern Pacific completed its main line to Tacoma. The advent of the railroad to Tacoma was followed by a period of great activity in the growth of the city, a growth that has seldom been equaled in city building in the United States.



N. P. R. R. CO.'S CAR SHOPS, TACOMA.

The Northern Pacific in building to the shores of Puget Sound opened up for settlement the vast area of country surrounding this inland body of water, and it caused its matchless resources to become known to the world. A great stream of immigration finding its source in the states of the East and South at once commenced to flow into the Northwest. Two years after the completion of the Northern Pacific to Puget Sound the cities of Tacoma, Seattle and Spokane had grown to important centers of trade and of a population of about 25,000 each. Houses could not be built fast enough at Tacoma to shelter the incoming multitude. Capital poured into the city by millions and it was immediately employed here in the erection of dwelling houses and substantial business blocks. Mills, factories, warehouses and elevators began to fill up the low ground at the waters' edge, and stores and offices multiplied

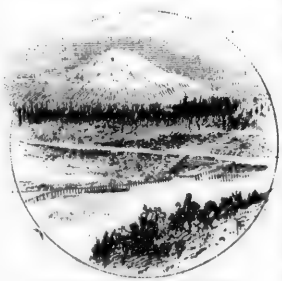
on the business streets. The Northern Pacific built extensive side-tracks and gave the city terminal rates which placed it at an advantage over all other points on Puget Sound. It is due to these rates that Tacoma has handled most of the wheat of the state of Washington shipped from Puget Sound ports.



INTERIOR, N. P. R. R. MACHINE SHOPS, TACOMA.

The growth of Tacoma has not only been phenomenal, but in many respects it has been the most marvelous of the growth of any American city. Since the completion of the Northern Pacific over 27,000 people have arrived in Tacoma and made the city their permanent home. The United States census of 1890 placed the census of Tacoma at 36,200. This rapid increase of population is still taking place, for the carefully compiled directory of 1893 showed that Tacoma and its suburbs at that time contained about 49,000 people.

The location of Tacoma and the beauty of its surroundings make it one of the most attractive of residence cities. Tacoma is built upon a peninsula which runs to a point forming a triangle. The highest point of this promontory is its center, a high plain extending its entire length, ending at its extreme northern boundary in an abrupt precipice. This is Point Defiance. From the water front and the tide flats covering three and one-half square miles and lying below and in front of the city the land rises gradually and in natural terraces. The summit of the slope is about 300 feet above the waters' edge. The east and west streets ascend the hill at easy grades and the main avenues running north and south stretch along the natural benches of the hillside for miles, forming magnificent drives. The residence district of the city is situated on the high lands where the windows of nearly every house command a magnificent view of the romantic mountain scenery. In this part of the city are many costly mansions surrounded by beautifully laid-out lawns and gardens. The rippling waters of Commencement Bay, with its high promontories and the irregular contour of its thickly wooded shore line, form a picturesque foreground for the fir-clad slopes and great snow-capped peaks of the Cascade Mountains. Surmounting this range, and in plain view of Tacoma, is Mount Tacoma, the monarch of the Cascades. This superb peak, clad in robes of virgin white, incomparable in its beauty and grandeur, towers 14,444 feet above sea level. Encircling its slopes is a system of enormous glaciers and ice fields presenting an almost impassable obstacle in the pathway of the Alpine climber attempting to scale its heights. Beyond the tide lands beneath the city the Puyallup river can be seen winding its way through the dense forest and thick underbrush of the Puyallup Indian reservation, emerging from which it flows a short distance and empties its waters into the bay in front of the city.



MT. TACOMA (RAINIER) FROM TACOMA.

It is on the low lands bordering the tide flats that many of the city's industrial plants are located. These include woolen mills, foundries, match, soap, furniture,

PHOTO. BY FRENCH.

COAL BUNKERS, TACOMA.

box and cracker factories, stockyards, iron and boiler works, breweries and sawmills. Among the latter is the extensive plant of the St. Paul and Tacoma Lumber Company. This is one of the largest plants of the kind on the coast. Further down the bay is the terminal yard of the Northern Pacific railroad. Next come the big ocean wharves and coal bunkers. From here down to a point near Point Defiance the shore is lined with great elevators and warehouses, large flouring mills and saw and shingle mills. Just outside the city limits and before the end of the peninsula is reached is the Tacoma smelter. This is the largest plant of the kind on the coast. Ores are received here from Alaska, British Columbia, California and Mexico. In 1892 this smelter turned out 14,861 ounces of gold, 528,060 ounces of silver and 4,176,803 pounds of lead. This output was worth $937,740.

Tacoma is essentially a manufacturing city. From manufacturing alone it derives a large part of its revenue. The products of its mills and factories are staple articles of commerce in the cities of South America, Oceanica and the Orient. It has been within the past five years that Tacoma has showed its remarkable commercial developments. Starting with a few sawmills, it now has within its limits manufactories representing $9,400,000 of invested capital. These industries employ 3,500 men and their output for 1893 aggregated over $9,000,000. The advantageous location of Tacoma, at the head of deep-water navigation on Puget Sound, makes it a natural manufacturing center. At its very threshhold are resources that would support a city of large population. The future of Tacoma rests alone on the development of these great resources which today offer splendid opportunities for the investment of capital.

PHOTO. BY FRENCH.

LOADING LUMBER, TACOMA.

The coal fields of Pierce county are the most important in the state. This coal makes a coke equal to that of the famous Connelsville coke of Pennsylvania. At Wilkinson, a few miles from Tacoma, 60 coke ovens are now in full blast. The importance of the proximity of this coking coal to Tacoma cannot be overestimated, in its bearing on the future prosperity of the city. In the manufacture of iron alone it will play an important part here. The mountains of Western Washington contain inexhaustible quantities of the best iron ores, and it is but a question of a few years when this ore will be converted into pig iron at Tacoma. The vast and almost unbroken forests surrounding Puget Sound are the greatest of America's timber reserves. This forest contains the finest timber in the world for general building purposes. The manufacture of lumber is now and will be for years the most important industry of Western Washington. Tacoma is the greatest lumbering center in the state, and Pierce county, of which it is the seat of justice, contains millions of feet of the finest timber. The agricultural lands adjacent to Tacoma produce 30,000 bales of hops per year. Of the wheat crop of the

PHOTO. BY FRENCH.

SHIP BUILDING, TACOMA.

state, estimated for 1893 at 22,000,000 bushels, nearly one-half is brought to Tacoma for shipment to foreign ports. Another great industry that contributes to Tacoma's prosperity are the fisheries of Puget Sound. This inland sea teems with the best of food fishes. Off Cape Flattery the halibut fishing surpasses that off New Foundland. These fish are brought to Tacoma in small sailing craft and from this point they are shipped to Eastern and interior points.

PHOTO BY FRENCH.

STATE INSANE ASYLUM, STEILACOOM.

The suburbs of Tacoma contain many interesting and picturesque points which are reached, as are all parts of the city, by a well-equipped and perfectly-managed rapid-transit system. There are now 60 miles of electric lines and two miles of cable road in operation at Tacoma. The Tacoma Railway & Motor Company, with a capital stock of $2,000,000, has an equipment of 52 first-class cars and employs 150 men. It operates 49 miles of street railway. The company makes its own cars which, in workmanship and finish, are equal to the most expensive cars manufactured in the East. The Eleventh-street cable road, operated by this company, forms a connection with a motor line running to American Lake, a beautiful sheet of fresh water four miles in length. From the lake the line runs to Fort Steilacoom, 15 miles distant from Tacoma. This old abandoned fort, now the site of the state insane asylum, was established as an outpost of the Hudson's Bay Company, and later, in 1849, it was garrisoned by a company of United States artillery. The historical traditions that surround it make it a spot of great interest. It was here that General Sherman and other noted soldiers gained their first experience in actual warfare. The first term of court held north of the Columbia river convened at this point in October, 1849. This court tried and convicted two Indians of the Snoqualmie tribe, who had led an attack on Fort Nisqually, and these Indians were hanged here.

PHOTO. BY FRENCH.

POINT DEFIANCE, PUGET SOUND.

The Point Defiance, Tacoma and Edison Railway Company is capitalized for $500,000. It operates an electric line 13 miles in length. This line runs from the suburban part of the city called Edison to Point Defiance, located just beyond the western limits of Tacoma. At Point Defiance the city maintains a magnificent natural park of over 700 acres in extent. This park is beautifully situated on a high and broad plateau which slopes down to the wide, sandy and pebble-strewn beach of Commencement Bay. In it are great pyramidal forest trees, numerous rivulets and miniature waterfalls, and in the summer a bewildering confusion of ferns and wild flowers. In 1893, seven miles of drives were laid out here, and 50,000 trees and shrubs were planted in the park. A walk 15 miles in length is now being built around the beach. There a number of

PHOTO. BY FRENCH.

WRIGHT PARK, TACOMA.

other public parks in the city that are much frequented by residents and visitors. The largest of these is Wright Park, a tastily arranged and designed tract of land containing 27 acres, located in the heart of the residence portion of the city.

When the Northern Pacific Railroad Company determined to make Tacoma its terminal city, its engineers were instructed to forget the wilderness that covered the prospective site of the city, and to bear in mind only its future greatness. These instructions were carefully carried out and today Tacoma presents the appearance of one of the most splendidly planned cities on the continent. The spirit of having everything connected with Tacoma done on a most magnificent scale has always dominated the actions of its citizens, and nearly every public or private enterprise has been planned and matured with an idea of the future greatness of the city constantly in view. The business streets of Tacoma are built up with fine blocks of brick and stone that in architectural design, appointments and cost are not surpassed by the finest structures of any city on the continent. Commencing in 1888, with the advent of the railroad, business blocks and residences multiplied at a remarkably rapid rate. In carrying on these extensive building operations, the citizens entered into a friendly rivalry in their attempts to make each other's building surpass in point of architectural beauty and solidity the class of buildings that had preceded it. This public-spirited rivalry has resulted in making Tacoma a compactly and attractively built city. Nearly all the buildings that line its business streets are of the most modern style of architecture, being of brick and stone and they are equipped and furnished in the most approved style.

PHOTO. BY FRENCH.

C STREET BUSINESS BLOCKS, TACOMA.

The four principal business thoroughfares of Tacoma—Pacific, Railroad and Tacoma avenues and C street—run parallel to each other. Tacoma avenue, which is at an elevation of about 200 feet or more above Pacific avenue, is paved with asphalt, and is lined with small retail shops and stores. At the head of C street is the new Chamber of Commerce building, an imposing brick and stone structure six stories high, and which cost $150,000. The Tacoma Chamber of Commerce is a representative body of business men who zealously guard the city's interests. The Chamber acts as an intelligence body in answering questions pertaining to Tacoma, or the country of which the city is the commercial center, and all letters addressed to this body will receive the most prompt attention.

PHOTO. BY FRENCH.

CITY HALL, TACOMA.

Pacific avenue, the principal retail business street, is 120 feet wide, and extends from a point north of the Northern Pacific depot to the ocean wharves. Occupying a commanding site at the head of this avenue is the city hall, one of the most imposing municipal buildings occupied for municipal purposes in the West. It is built of Roman brick, and its construction involved an outlay of $300,000. Another public building here, the finest of its character in the Northwest, is the Pierce County court house. This stately stone edifice cost about $450,000. It is the handsomest building in the city. A large quantity of the stone used in the construction of the court house was furnished by the Pittsburg Stone Company, which owns an extensive blue sandstone quarry at Burnett, Washington. The stone of this

quarry is in great demand, owing to its cheapness and superior quality. It has been extensively used in the best structures of Tacoma and Seattle. The Pittsburg Stone Company, with offices at Tacoma, are prepared to fill orders for promiscuous blocks, dimension and rubble stone, and sawed stone.

PIERCE COUNTY COURT HOUSE, TACOMA

On the eastern side of the Cascade Mountains, and beyond the broad Columbia river, lay the great wheat fields of Washington. The prolific soil of this region annually yields over 20,000,000 bushels of wheat. This wheat is shipped by rail to Tacoma and there loaded in vessels for shipment to different parts of the world. The first wheat shipment made from Tacoma was made in 1881, by the American ship Dakota. This was the beginning of a commerce which, in 12 years, has made Tacoma one of the greatest grain-exporting ports of the Pacific, and the only point on Puget Sound from which foreign shipments of grain are made. The wheat is handled in Tacoma by four elevators, with a total storage capacity of 2,500,000 bushels. This will be increased, in 1894, by the erection of a 1,000,000 bushel elevator by a combination of the farmers of Eastern Washington. The carrying of this wheat to Tacoma for shipment has resulted in the establishment here of four large flouring mills, whose combined output, in 1893, was valued at about $2,000,000. Of this flour 70 per cent is exported to China and Japan. That Tacoma is fast becoming one of the important seaports of the world is shown by the wheat and flour shipments from this place since 1881. The first cargo of wheat for foreign ports from Tacoma was valued at $51,000. During the next season, 1882-3, the American ships Gregory and Iroquois, took away an aggregate of 129,000 centals of wheat, valued at $207,800. The following seasons the British ship Hecla cleared with a cargo of 44,923 centals, valued at $67,384. In 1885 three ships carried away from Tacoma 140,920 centals, valued at $185,860. During the season of 1887-8 Tacoma shipped 11 cargoes, containing 717,510 centals, valued at $894,583. In the season of 1888-9 27 cargoes cleared from Tacoma, aggregating 1,774,139 centals, valued at $1,522,140, The next season's shipments showed a large increase. In 1890-1 45 vessels cleared from Tacoma with 2,150,776 centals of wheat, valued at $3,593,440. A recapitulation of the custom-house reports shows that during the season of 1891-2 there left Tacoma 48 cargoes, containing an aggregate of 2,152,016 centals of wheat and 90,393 barrels of flour, of a total value of $3,658,146. At the present writing seven ships are loading wheat at Tacoma, and a fleet of eight more is on its way to the city. The following table gives the name of each ship loaded with flour or wheat, its tonnage, amount of value of each cargo and tonnage which left Tacoma between September 10, 1892, and September 2, 1893:

PHOTO. BY FRENCH.

LOADING WHEAT, TACOMA.

PHOTO. BY FRENCH.

DISCHARGING TEA, TACOMA.

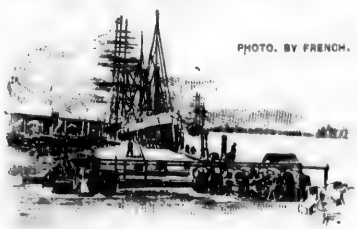


PHOTO. BY FRENCH.

WHARF SCENE, TACOMA.

DATE	RIG	NAME	REG TONS	WHEAT CENTALS	FLOUR BBLS.	VALUE	DESTINATION
Sept. 10	Br. S. S.	Phra Nang	1,021		8,850	$ 36,286	Hong Kong
Sept. 27	Br. S. S.	Victoria	1,992		5,750	29,375	Hong Kong
Sept. 29	Br. Bark	Elliot	1,065		17,600	70,400	Limerick
Oct. 6	Br. Ship	Lady Lawrence	1,407	47,465		58 000	U. K. f. o.
Oct. 15	Br. Ship	Forrest Hall	1,999	70,896		85,000	U. K. f. o.
Oct. 15	Br. Ship	Ben Nevis	1,061	32,363		40.000	U. K. f. o.
Oct. 15	Br. Ship	Andreta	1,708	60,210		75.000	Gloucester
Oct. 15	Br. S. S.	Loo Sok	1 012		125	615	Hong Kong
Oct. 22	Br. Ship	Record	1,722	61,111		77,000	U. K. f. o.
Oct. 22	Br. Bark	Inveresk	1,297	51,727		65,520	U. K. f. o.
Oct 22	Br. Ship	Colony	1,694	56,224		70,300	U. K. f. o.
Oct. 27	Br. Bark	Lucipara	1,863	64,848		80,000	U. K. f. o.
Oct. 29	Br. Ship	Wynnstay	1,573	53,760		66 000	U. K. f. o.
Oct. 30	Br. Bark	Ariadne	1,167		19,083	62,976	London
Nov. 2	Br. Bark	Earl Derby	961	32,346		40,400	U. K. f. o.
Nov. 8	Br. Ship	North Riding	1,371	44,990		55,000	U. K. f. o.
Nov. 6	Br. Ship	Mylomene	1,900	67,625		84,500	U. K. f. o.
Nov. 12	Br. Bark	Earnscliff	1,875	63,974		78,000	Bristol
Nov. 12	Br. Ship	Drumburton	1,840	65,125		81,405	U. K. f. o.
Nov. 15	Br. S. S.	Zambesi	1,565		14,713	58,852	Hong Kong
Nov. 17	Br. Ship	Star of Italy	1,571	49,576		60,318	U. K. f. o.
Nov. 20	Ger. Bark	Gutenburg	627	22,232		28,000	U. K. f. o.
Nov. 21	Br. Ship	Dimsdale	1,779	62 294		75.000	U. K. f. o.
Dec. 3	Br. Ship	Fingal	2,485	88,175		110,000	Antwerp
Dec. 3	Br. Ship	Hawksdale	1,723	61,891		74,000	Antwerp
Dec. 8	Br. Ship	Timandra	1,500	50,905		64,000	Plymouth
Dec. 9	Br. Ship	Lady Isabella	1,462	51,094		63,000	Cork
Dec. 14	Br. Ship	Ventura	1,669	57,320		70,000	Cork
Dec. 15	Br. S. S.	Victoria	1,992		10,875	38,062	Hong Kong
Dec. 22	Br. Ship	Annesley	1,591	53,155		66,000	U. K. f. o.
Dec. 24	Br. Bark	Invermark	1,334		26,085	100,000	U. K. f. o.
Dec. 26	Br. Ship	MacMillan	1,450	49,683		64 000	Cardiff
Jan. 3	Br. Ship	Persian Empire	1,532	46,217		54,000	U. K. f. o.
Jan. 7	Br. Ship	Lindisfarne	1,669	58,240		68,000	U. K. f. o.
Jan. 12	Br. S. S.	Tacoma	1,661		5,102	16 326	Hong Kong
Jan. 18	Br. Ship	British Commodore	1,300	45,068		55.000	U. K. f. o.
Jan. 20	Br. Ship	Pass of Brander	1 903	75,856		89,000	U. K. f. o.
Jan. 24	Br. Ship	Middlesex	1,692	58,251		68,000	U. K. f. o.
Jan. 24	Br. Ship	Pass of Melfort	2,196	84,830		100.000	U. K. f. o.
Jan. 28	Am. Ship	*Abner Coburn	1,879	49,841		55.000	Liverpool
Feb. 3	Br. Ship	Galatea	1,694	55,552		65,000	U. K. f. o.
Feb. 9	Br. Ship	Melanope	1,608	47,600		58.000	U. K. f. o.
Feb. 15	Br. S. S.	Flintshire	2,644		16,250	50,842	Hong Kong
Feb. 15	Br. Ship	Centurion	1,704	62,988		75,600	U. K. f. o.
Feb. 21	Br. S. S.	Victoria	1,992		9,500	30,957	Hong Kong
Feb. 26	Ger. Ship	Emin Pasha	1,567	54,351		65.000	U. K. f. o.
Feb. 28	Br. Ship	Crown of England	1,763	61,443		73,000	U. K. f. o.
Mar. 10	Br. Ship	City of Delhi	1,199	38,088		47 000	U. K. f. o.
Mar. 15	Br. Ship	Dalgonar	2,565	87,390		102,000	Liverpool
Mar. 25	Br. S. S.	Tacoma	1,661		5,050	20,200	Hong Kong
Mar. 26	Br. Ship	Archdale	1,479	54,280		66,615	U. K. f. o.
Mar. 29	Br. Ship	St. Monan	1,453	48 052		56,000	U. K. f. o.
Mar. 29	Br. Ship	Andora	1,670	56,986		66,000	U. K. f. o.
Apl. 20	Br. S. S.	Mogul	1,827		1,406	4,430	H ng Kong
Apl. 21	Br. Ship	Garsdale	1,665	57,105		66,500	U. K. f. o.
May 8	Br. Ship	Drumcliff	2,468	83,109		98,500	U. K. f. o.
May 10	Br. S. S.	Victoria	1,992		6,512	20,838	Hong Kong
June 10	Br. S. S.	Tacoma	1,661		7,380	23,616	Hong Kong
June 30	Br. Ship	Ecclefechan	2,031	65,950		70,000	U. K. f. o.
July 1	Br. S. S.	Mogul	1 827		3,750	11,812	Hong Kong
July 22	Br. S. S.	Victoria	1,992		2,050	6 055	Hong Kong
Aug. 22	Br. S. S.	Tacoma	1,661		9,472	30,074	Hong Kong
Sept. 2	Am. Ship	†C. S. Bement	1,899	58,255		50,000	Liverpool
Sept. 2	Br. Ship	Glenalvon	2,072	72,869		73,000	U. K. f. o.

* Also 11,016 cases salmon, value $44,000.

† Also 10,564 cases salmon, value $47,500.

PHOTO. BY FRENCH.

TEA STEAMER AT TACOMA WHARVES.

The exports from Tacoma are not exclusively confined to wheat and flour. Long before a bushel of wheat was shipped from this port an industry sprung up at Tacoma which in subsequent years proved to be the most potent cause of the city's rapid development. This industry was the manufacture of lumber. It is estimated that the forests of which Tacoma is the lumbering center contain 1,500,000,000 feet of lumber. Of this 60 per cent. is fir, a wood more valuable than pine and as durable as oak. A large portion of the remaining woods of this vast forest is red cedar. From this wood there were manufactured in 1893 over 125,000,000 shingles. The lumber industries doing business in Tacoma have an aggregate capital invested of $4,600,000 and they employ 1,235 men. The total output of the Tacoma sawmills in 1892 was 153,137,840 feet of lumber. Among the sawmills of Tacoma are two of the largest in the United States. These two mills alone shipped by water in 1892 59,744,218 feet of lumber and 20,000,000 laths.

PHOTO. BY FRENCH.

PACIFIC AVENUE FROM 13TH, TACOMA.

PHOTO BY FRENCH.

PACIFIC AVENUE FROM NINTH, TACOMA.

The same causes which have combined to make Tacoma an important manufacturing city have also tended to make it one of the leading jobbing centers of Puget Sound. With the advantages of shipping facilities both by rail and by water and with cheap freight rates to local and distant points, Tacoma holds the key to the trade of the rich and boundless expanse of country surrounding it and stretching away far to the east. The success and rapid growth of Tacoma's wholesale trade almost surpasses belief. From a business of $2,500,000 in 1888 the trade of the city increased to $10,000,000 in 1890, and to over $18,000,000 in 1893. This is a record that has never been equaled in the Union. There are today in Tacoma 107 firms doing a jobbing business. These houses employ 84 traveling salesmen and 2,544 other men.

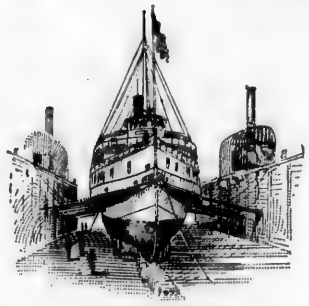
PHOTO. BY FRENCH.

ELEVENTH STREET, TACOMA.

The extensive car shops of the Northern Pacific Railroad Company are located in the suburban part of the city called Edison. These comprise a substantial group of buildings covering about 60 acres of land. The total cost of this immense plant was about $850,000. The monthly payroll of these shops amounts to over $40,000, and the manufactured product coming from them consists of engines, boilers, cars and everything connected with the operating of a railroad. During 1892 these shops turned out 200 patent stock cars, and 65 engines. Arrangements are now being made for manufacturing here nearly all the passenger coaches used

PHOTO. BY FRENCH.

O STREET FROM UNION CLUB, TACOMA.



DRY DOCK, TACOMA.

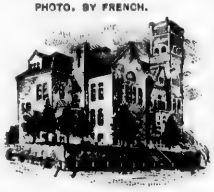
by the company. The iron-working establishments represent $275,000 invested capital. They employ 260 men and the value of their product is about $805,000.

The public school system of Tacoma is an admirable one. The parsimonious policy of some communities in providing narrow halls and poorly ventilated rooms has not prevailed in Tacoma. On the contrary, the city has large modern school buildings which present a fine architectural appearance. These buildings are furnished with every convenience for the comfort and health of the pupils. Tacoma has closely followed the most approved methods of education from other cities. In 1885 the school property of Tacoma was valued at $30,000, and the average daily attendance at the public schools at that time was 600. At the present time over 5,500 pupils receive instruction in the 15 handsome and commodious school buildings of the city, and these buildings are valued at $379,000. These buildings contain furniture worth $45,000, and the grounds they occupy are worth $285,000. This makes the total valuation of all school property in the city $609,000. The Tacoma high school is an excellent institution, and its graduates enter college without additional preparation or study. The names of the different public schools and their respective cos. are as follows: Bryant, $61,000; Central, $30,000; Emerson, $34,000; Edison, $12,000; Franklin, $27,000; Hawthorne, $31,000; Irving, $30,000; Lincoln, $12,500; Longfellow, $15,000; Lowell, $47,000; Oakland, $10,000; Sherman, $28,000; Sheridan, $10,000; Whitman, $32,000.

PHOTO. BY FRENCH.

THE WHITMAN SCHOOL, TACOMA.

PHOTO. BY FRENCH.



LOWELL SCHOOL, TACOMA.

The growth of the churches of Tacoma has kept pace with the growth of the other interests of the city. The first church organized in Tacoma was the St. Peters Episcopal, the congregation of which is still holding services in the quaint old church building with its detached wooden bell-tower erected in 1857. There are now 54 churches in Tacoma. They have an aggregate membership of 7,500. The Sunday schools and mission organizations fostered by the stronger churches will add almost as many members more. The Young Mens' Christian Association was organized in Tacoma in 1883. Since that time it has rendered valuable practical aid to hundreds of young men in the city. The association is now perfecting plans for the erection of a large building, which when completed will give the institution the best equipment of any association on the coast.

PHOTO. BY FRENCH.

IRVING SCHOOL, TACOMA.

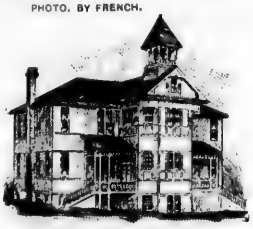
The shrewd business man is aware of the fact that banks always indicate accurately the financial condition of a community in which they do business. Hence statistics of banks and banking of any community fur-

nish unquestioned statistics of the city's standing. The remarkable growth of Tacoma is shown by the volume of business transacted by its financial institutions. From comparative poverty of a few years ago, Tacoma has grown to be one of the great money centers of the West. There are now doing business here 20 banks, with a capital of $3,504,200, and whose surplus and undivided profits amount to $705,000. Of these banks seven are national, five state, six savings, and two are branches of foreign banks. The showing of these banks is as follows: Tacoma National, $200,000; Merchants National, $250,000; Pacific National, $200,000; Washington National, $500,000; National Bank of Commerce, $200,000; Citizens National, $100,000; Columbia National, $279,200; Traders Bank, $500,000; Fidelity Trust Company, $500,000; Commercial Bank, $200,000; Scandinavian Bank, $100,000; German American, $60,000; Tacoma Trust & Savings, $50,000; Union Savings, $100,000; Tacoma Building & Savings Association, $100,000; State Savings, $75,000; Puget Sound Savings, $50,000; Edison Savings, $50,000; Bank of British Columbia, [branch], $3,000,000; London & San Francisco, limited, [branch], $2,450,000; Metropolitan Savings, $100,000. During the panic of last year, the Tacoma banks, like many other strong financial institutions of the country were called upon to meet several runs, and as a result some of the banks of the city were forced to suspend payment. Satisfactory steps have since been taken however to put these suspended banks in condition for reopening, and with the faith which the people of Tacoma show in their home banks, it is highly probable that the affairs of all the banks will be soon placed in such shape that they will all continue in business.

PHOTO. BY FRENCH.

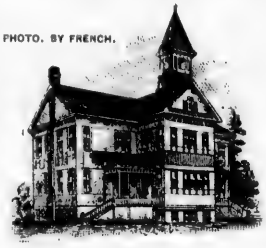
PRESBYTERIAN CHURCH, TACOMA.

PHOTO. BY FRENCH.



THE LONGFELLOW SCHOOL, TACOMA.

PHOTO. BY FRENCH.



LINCOLN SCHOOL, TACOMA.

PHOTO. BY FRENCH.

BRYANT SCHOOL, TACOMA.

Tacoma is in a good financial condition. Its credit is good, its bonds rank high in moneyed circles of the East, as is evidenced by the recent purchase of $1,750,000 of Tacoma water bonds, at a premium by one Eastern capitalist. The city's indebtedness is exceedingly low when the extensive public improvement which the city has made are duly considered. The following figures showing the assessed valuation of property in Tacoma at different periods during the past 12 years will prove interesting. In 1882 the total assessed value of property in Tacoma was $75,000. Five years later this had increased to $4,090,798. During the next three years the influx of population and wealth caused an increase in property valuations of over 700 per cent., and in 1890 the assessed valuation of property amounted to $29,841,750. In January, 1893, the valuation of Tacoma

PHOTO. BY FRENCH.

EMERSON SCHOOL, TACOMA.

PHOTO. BY FRENCH.

THE FRANKLIN SCHOOL TACOMA.

property as shown by the city's assessment roll, was $43,074,147.

Tacoma is now the only American competitor of San Francisco for the Asiatic trade. The Northern Pacific Steamship Company run two fast passenger steamers and mail steamers each month between Tacoma, Hong Kong, Shanghai and Yokohama. This company also owns a fleet of sailing vessels which ply between Tacoma and the Orient. The westward cargoes of these vessels consist of lumber, flour, salmon and general freight. The return cargoes from the Orient are made up of silks, rice, jutes, curios and products of Chinese and Japanese skill. The Pacific Steamship Company runs a line of boats between Tacoma and San Francisco. Another line of steamers plies between Tacoma and Alaska, and the boats of the recently organized North Pacific Steamship Company run from Tacoma to Vancouver, B. C., and from the latter port to Portland, touching at Seattle and Port Townsend each way. In addition to the large fleet of ocean vessels which touch at Tacoma, numerous small craft ply between Tacoma and all points on Puget Sound. The custom's report of the Puget Sound collection district shows that the value of exports for the fiscal year ending June 1, 1893, was $5,255,966. Of this amount $3,321,511, or nearly 61½ per cent., was credited to exports from Tacoma. In 1892 it was shown that 416 vessels, having a registered tonnage of 478,828, entered the port of Tacoma, as against 310 vessels of a tonnage of 384,295, which sailed into the harbor here in 1891. The imports to Tacoma from China and Japan for the six months ending June 30, 1893, aggregated in value $4,252,540.

PHOTO. BY FRENCH.

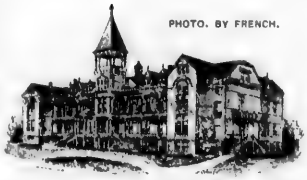
CENTRAL SCHOOL, TACOMA.

PHOTO. BY FRENCH.

HAWTHORNE SCHOOL, TACOMA.

To its commerce Tacoma owes much of its greatness. It is here that the tracks of the Northern Pacific railroad first reach tide water. Here the ocean steamers and wheat ships which come to Puget Sound reach the farthest point inland. It is at Tacoma that the riches of the East meet in exchange for the products of the West. The meeting here of the iron horse with the ocean greyhounds forms the shortest and most direct route between the Atlantic seaboard and the ports of Australia, India and the Orient. Forty years ago the prophetic finger of Thos. H. Benton pointed to this route as the American road to Asia. There is demonstrated today what the utterances of this far-seeing statesman intimated when he said that it would "revive upon its line all the wonders of which we have read and eclipse them, and that the wilderness from the Mississippi to the Pacific would start into new life at its touch." Today the Asiatic trade is controlled to a great extent by England. An examination of the geographical location of Puget Sound, and a comparison of distances between it and Asia and between Asia and Liverpool, will disclose the fact that this trade naturally belongs to the United States.

PHOTO. BY FRENCH.



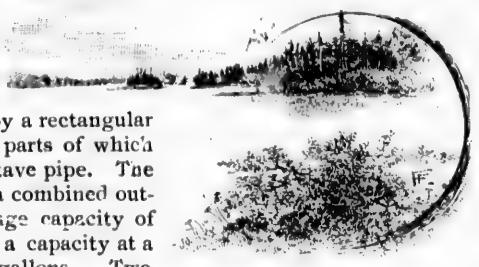
ST. JOSEPH'S HOSPITAL, TACOMA.

EXPOSITION BUILDING, TACOMA.

Puget Sound is 5,000 miles nearer Hong Kong than is Liverpool, and by way of Tacoma, New York is brought 1,400 miles nearer to Canton than is Liverpool. Australia, Oceanica and Siberia are thousands of miles nearer the state of Washington than they are to England. It is impossible to estimate the magnitude of the commerce that will some day spring up between Puget Sound and the Orient.

In 1893 the city of Tacoma purchased from a private corporation a system of water works and a complete electric light plant. This purchase was consummated at a cost of $1,750,000. The city was bonded for this amount and it is a source of much gratification to its citizens that during one of the most wide-spread and severe business depressions the country has ever experienced, the bonds of Tacoma readily commanded a premium in the financial centers of the East. The city now daily uses 6,000,000 gallons of water out of an available daily supply of 9,000,000 gallons. The present sources of supply are Spanaway lake and Clover creek. These are connected by a rectangular conduit—a flume 24 inches square, parts of which are now being replaced by a 22 inch stave pipe. The system embraces four dams having a combined outflow of 6,500,000 gallons, and a storage capacity of 1,400,000 gallons, and a reservoir with a capacity at a depth of 13 feet of about 1,780,000 gallons. Two pumping stations, with a capacity of 3,000,000 gallons per day, send the water to elevated parts of the city. The system includes 67 miles of street mains and 245 fire hydrants.

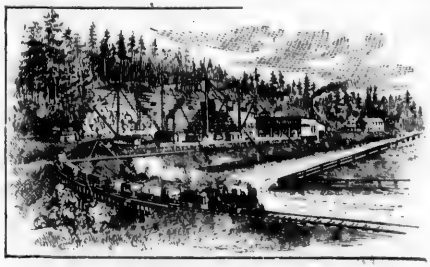
PHOTO. BY FRENCH.



AMERICAN LAKE, TACOMA.

Tacoma is well protected from fire by a department that has achieved a reputation of being one of the best disciplined and most efficient organizations of its kind on the coast. The force consists of a chief, an assistant chief and 60 men. The apparatus and department property cost $147,790. It includes six steam fire engines, two chemicals, three hook and ladder trucks, four hose wagons and four supply wagons. The operating expenses of the department amount to about $90,000 a year.

THE EUREKA SANDSTONE COMPANY.—The most extensive stone quarry in Western Washington is located at Tenino and is owned by the Eureka Sandstone Company of Tacoma. It is with one exception the only blue sandstone quarry in Oregon or Washington. The crushing strength of this stone is 5,000 pounds to the square inch. All the stone from this quarry is quarried and cut by machinery, steam channelers, steam derricks, gang saws and other improved machinery being used for this purpose. The stone is sawed in all dimensions and of any desired thickness. The daily output of the plant is about 1,500 cubic yards of sawed stone. This is taken out of a solid wall of rock over 100 feet high. It is



EUREKA SANDSTONE CO.'S WORKS, TENINO.

PROF. J. W. TAIT, TACOMA.
(TACOMA BUSINESS COLLEGE.)

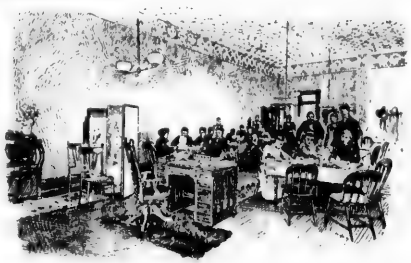
used in the erection of the finest structures of all the large cities of Western Washington and Oregon. The new Chamber of Commerce building of Portland, and a part of the Pierce county court house at Tacoma, are built of this stone.

JOHN W. TAIT.—The Tacoma Business College and Normal Training School is one of the best known and most prominent of Washington's private educational institutions. It is managed by Professor John W. Tait, an able and widely known instructor. The pupils attending this college come not only from Tacoma, but also from the smaller cities and rural districts of the state.

The business course at this school includes instruction in commercial law, book-keeping, penmanship, actual business and office practice and commercial correspondence. The normal course is especially adapted to those who desire to become teachers. The English course prepares students for admission to Eastern universities. Besides these, elocution and shorthand are taught. The tuition fees are very moderate. Circulars explaining the systems taught at the college will be sent by Professor Tait on application.

THE TACOMA SCHOOL OF SHORTHAND.—The Tacoma School of Shorthand and Typewriting is one of the few permanent institutions of its kind on the coast. The curriculum of the school embraces a thorough and systematic course in stenography, the system taught being based upon simple principles of brief phonetic writing which are easily mastered by the student.

PHOTO. BY FRENCH.



TACOMA SCHOOL OF SHORTHAND, TACOMA.

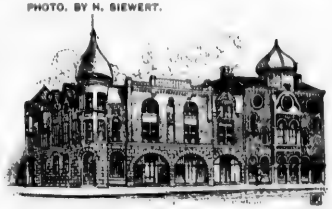
A course of three months, in this school qualifies the student to do satisfactory work as an amanuensis or stenographer. The terms of tuition and circulars will be sent, on application, by Mrs. A. C. McGiven, the principal of the school. This lady is widely known, not only as a teacher, but as a charming hostess. The school has night classes which pupils can attend without neglecting their business. Graduates of this school are assisted in securing positions.

Puyallup, Washington.—Puyallup, located on the main line of the Northern Pacific, nine miles east of Tacoma, and near the junction of the Seattle and Tacoma branch of the same road, is easily the banner city of the rich tributary hop and farming district from which it takes its name. Puyallup occupies a site on the banks of the Puyallup river, and is the banking and commercial center of one of the best parts of the state of Washington.

Watered by the Puyallup and Carbon rivers, the Puyallup valley is unsurpassed in richness by any of the other famous valleys of the Northwest. It is 3 miles wide, and its length is about 20 miles. Practically every acre of this valley land is unex-

celled for hop and fruit growing, and it is this valley which is today one of the greatest hop gardens of the world.

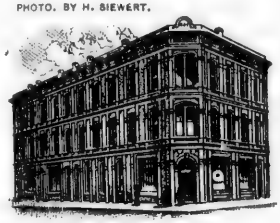
PHOTO. BY H. SIEWERT.



FIRST NAT'L BANK BLOCK AND OPERA HOUSE, PUYALLUP.

Puyallup was first settled in 1861. It was not until 1889, when the wonderful development of the hop fields of this section made the establishment of a trade center here imperative, that Puyallup began to make any substantial advancement in growth and material development. Since that time the growth of the place has been rapid, but by no means phenomenal when the many natural advantages of its location, its wonderfully rich tributary district, and last, but not least, the energy and pluck of its inhabitants are duly considered. Viewed from any other standpoint than that of Western progress, where cities are expected to grow if they ever get started in the right channel, the increase in population and wealth of Puyallup, during the past four years has been phenomenal, and in this time a city has sprung up where, before the era of progress began, nestled a small village of but little commercial importance. Since 1889 hopyards at the present site of Puyallup have been replaced by well paved streets and solid business blocks, and where farms were cultivated a few years back is now the site of the residences of the best people of a flourishing young city.

PHOTO. BY H. SIEWERT.

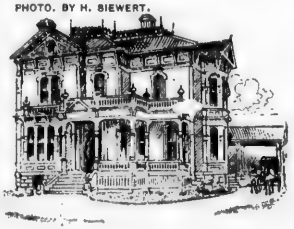


BANK OF PUYALLUP BUILDING, PUYALLUP.

The assessed valuation of the city property in Puyallup today is $1,910,000, and the population is upwards of 2,000. The city is perfectly lighted by electricity, a good water-works system is maintained, and excellent protection is afforded against fire by a well trained fire department. The city has good schools, well supported churches, and has all the evidence of a prosperous and wide-awake community.

Puyallup is especially favored in the matter of transportation facilities afforded its business men. The main line of the Northern Pacific passing this point furnishes direct connection between Puyallup and all points in Eastern Washington and Eastern Oregon, as well as with the East, while connection with Western Washington, Western Oregon and California on the south is made by the same line. Puyallup also has direct connection with Seattle by rail. Eighteen passenger trains stop at Puyallup every day in the year, and in addition to this a proportionate number of local and through freight trains also register at the city depot. This statement in itself is sufficient to establish Puyallup's claims as a prominent railroad center. This rapid and frequent train service over the line passing Puyallup affords the best of shipping facilities to the place. Hops, the staple product, are shipped direct from Puyallup to all parts of the United States, while the perishable fruit and vegetable products of the tributary district are easily shipped from here to all the principal points of the Sound, where they find a ready sale.

PHOTO. BY H. SIEWERT.



RESIDENCE, EZRA MEEKER, PUYALLUP.

The leading public school building of Puyallup is a handsome structure, the construction of which involved an outlay of $9,000. The school is presided over by competent teachers, and the daily attendance is 318 pupils. In addition to the excellent public school system of the city, Puyallup supports two other schools of a semi-private nature, which are doing excellent educational work. Seven religious organizations own their own church buildings at Puyallup. The Unitarian church has recently dedicated its vestry for free library and reading-room purposes. Residents and strangers alike are welcome at all times to the library, and they are offered here every facility for general reading and self-improvement. Already the library is in receipt of some 70 of the leading periodicals of Europe and America, and it is the hope of the leading spirits in this commendable enterprise to have the library stocked with about 1,000 volumes of the standard works some time during the present year.

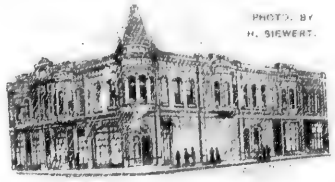


PHOTO. BY H. SIEWERT.

SPINNING BLOCK, PUYALLUP.

Among the leading business houses of Puyallup, the large general merchandise store of J. P. Stewart & Son easily takes the lead. This firm occupies its own spacious and elegant two-story brick building, 72 feet wide by 110 feet deep, which was erected at a cost of $27,000. The Puyallup Hardware Company, located in the First National Bank Building, Ezra Meeker & Co., leading hop-growers and merchants are also representative firms of the city who have done much to advance the general prosperity of Puyallup. One strong bank is located at Puyallup.

PHOTO. BY H. SIEWERT.

J. P. STEWART BLOCK, PUYALLUP.

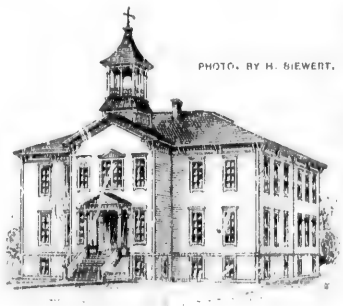


PHOTO. BY H. SIEWERT.

CENTRAL SCHOOL, PUYALLUP.

Among the many handsome and substantial buildings of Puyallup, the Spinning block, erected by Frank R. Spinning at a cost of $20,000, is worthy of special mention. The upper 33 rooms of this elegant structure are occupied as a well conducted family hotel, under the name of the Spinning House. Clean beds, well-kept apartments and an excellent table have earned for the Spinning House a high reputation, among the city people of Puyallup and transient guests alike. Five large rooms on the ground floor of the Spinning block are occupied for store purposes. Other fine buildings of Puyallup are the Bank of Puyallup, the J. P. Stewart block, the First National Bank building and the Opera House, the latter of which has a seating capacity of 600.

The one crop which has made famous the Puyallup valley and the city which is the commercial center of this wonderfully rich district is that of hops. In an able article on hops and hop culture, written by the Hon. Ezra Meeker and published in connection with the present article on Puyallup, will be found a great fund of infor-

mation on one of the most important industries of the great state of Washington. Jacob R. Meeker, the father of Ezra Meeker, was the pioneer hop-grower of the Puget Sound country and the latter gentleman is today regarded everywhere on the coast as one of the best authorities on the subject of hops in the United States. The raising of hops in this section is the leading industry for the one reason that hops have always paid better than any other crop. The highly productive soil of the lands of the Puyallup valley, together with the equable climate of this section, the abundant rainfall and the heavy dews all combine to make this one of the best fruit and vegetable-producing districts of the state. Vegetables and fruit from the Puyallup valley can be placed in the Tacoma market in about half an hour after they are gathered, and in a little over an hour they can be placed on sale in the stores of Seattle. Berries of all kinds do well here, and berry raising in the valley is now a most profitable industry. Strawberries, under the warm sun of this section and in the rich, well watered soil attain a size here that seems almost incredible to those who have seen this fruit raised in other sections. Each hill of strawberry plants in the Puyallup valley is relied upon to yield a quart of fruit a season and the flavor of this delicate fruit is unsurpassed. In addition to the agricultural resources of the Puyallup valley, the lumbering interests of the section form a most important industry. Near Puyallup are large forests of fine fir and cedar, together with an ample supply of timber suitable for sawing into the finest finishing woods. The output of the Hastic Lumber Company located at Puyallup for 1892 was 3,000,000 feet of lumber and 3,000,000 shingles. Stevenson Bros., located at the same place, turned out at their mill during 1892 1,500,000 feet of lumber.

A creditable weekly paper, *The Citizen*, is published at Puyallup under the editorial charge of H. B. LeFevre. With good schools, wide-awake people and a perfect climate, Puyallup is one of the most attractive places in Washington for a permanent residence and with the growth of one of the richest sections of the state tributary, will come an increase in Puyallup's population and wealth that will always maintain for this point a place among the leading commercial centers of Western Washington.

Hops and Their Culture.—[By E. Meeker, of Puyallup, Washington.] For centuries past hops have been used for brewing beer and ale and have always been esteemed the best material for the manufacture of the lighter beverages coming under the head of "malt liquors." In addition to their use by brewers, the tender shoots of the young hop plant have been used as an article of food, the surplus hop vines are fed to stock and the leaves and roots of the plant are valuable for tanning purposes.

PHOTO. BY H. SIEWERT.

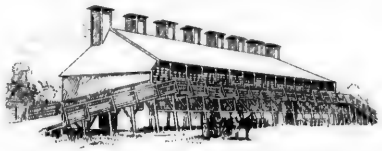
PIONEER HOP HOUSE, STATE OF WASHINGTON, PUYALLUP. (BUILT BY EZRA MEEKER.)

In olden times hops were much used for medicine. Of late years the use of hops in the medical profession, while not particularly discouraged, has not kept pace with the demand for other herbs for their corrective powers on the system, and the hop today is chiefly valuable for brewing purposes.

The earliest mention of the cultivation of hops of which any accurate account of the crop was made was given by Pliny. This account shows that the

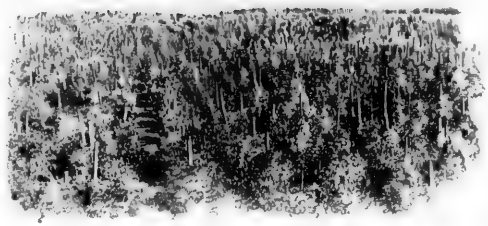
Romans were acquainted with the virtue of lupulin or "hop dust." In the eighth and ninth centuries mention was made of the "hop gardens" in France and Germany, but it was not until the beginning of the 17th century that the cultivation of hops assumed sufficient importance to attract general attention in Europe. It has only been within a period covered by the life of the writer, between 1830 and the present time, that hop culture in the United States has been recognized as an important industry of the country. In 1840, 6,000 bales of hops were produced in the United States. The product reached a total of 50,000 bales in 1860. In 1870 the hop product of the country reached a total of 125,000 bales, and for the years 1890 and 1891 the annual yield reached the enormous quantity of 200,000 bales. It is worthy of note that one-fifth of the entire hop product of the country during the last two mentioned years was raised in the young state of Washington.

The first hops known to have been grown in Oregon or Washington for commercial use were raised by my father, Jacob R. Meeker, on his farm in the Puyallup valley, about three miles from the site of the present flourishing city of Puyallup. This, if my memory serves me right, was in the year 1866. From a small planting among the trees in his young orchard the first crop, equivalent to one bale of 180 pounds, was cured over the kitchen fire and was marketed in small sacks at Olympia. The purchaser of this crop was Chas. Wood, a small brewer of that city, who paid 85 cents a pound. This crop was eclipsed 20 years later by one of 50,000 bales, or in round numbers 9,000,000 pounds, but the price of hops has never been exceeded but once over what was received by my father for his first picking, and this was in the famous year 1882, when for a short period sales were made at $1.05 a pound, thus yielding to the hop grower a clear profit of nearly $2,000 per acre. The first crop raised in the Puyallup valley was followed the next season by a larger one which aggregated a few bales. This was cured in an outhouse which was subsequently remodeled into a primitive hop house. This old building is still standing near Puyallup as a memento of the early attempts at hop raising in Washington.



HOP HOUSE, E. MEEKER & CO., KENT. (BUILT IN 1888.)

My first planting of hops as a field crop was made in 1867. This resulted in a yield the first year of 17 bales or about 3,000 pounds. Gradually increasing the amount of ground each successive year planted to hops, by 1884 I had 170 acres in hops, from which I harvested and sold over 168 tons. This was an average yield of nearly a ton to the acre. The consumption of hops in the United States when my first yard was planted, a site that is now covered with the fine brick blocks of Puyallup, was, quoting from memory, about the quantity which would be required in the manufacture of 6,000,000 barrels of beer. Notwithstanding the great temperance reform of later times the consumption of ale and beer in the United States now attains the enormous amount of 32,000,000 barrels every year, and the demand for these fermented drinks is steadily increasing at the rate of over 2,000,000 barrels a year. These figures will give the reader a faint conception of the extent and value of the brewing industry to the country and also of the importance which the culture of hops must attain here in the near future. Nearly one-half of the hops raised in the United States are from the Pacific coast, the greater part of the product being from Washington and Oregon.



HOP FIELD BETWEEN TACOMA AND SEATTLE.

The effect of the large plantings of hops in the newer fields of the coast has been to discourage increased planting in the older hop fields of the world. There has been an actual diminution of acreage planted to hops in England, and a neglect of the yards in many of the districts of the old world, and even on this side of the Atlantic, especially in New York. The decrease in the acreage planted to hops in England alone, where actual statistics are given, was over 5,000 acres prior to 1890, since which time the former steady decline of hop raising has been arrested.

In hop raising the yards of Washington have given some remarkable yields. In 1891 I produced, harvested and sold over 5,000 pounds of choice hops from one acre of ground. Were it not for the fact that this statement can be verified by responsible living witnesses the writer would almost shrink from giving this publicity. I have never heard of this being equaled anywhere in the world, but several cases have come under my direct observation where the yield of 4,000 pounds has been harvested from a single acre. It is average results in raising any crop that count for the most. Although I have not the advantage of exact statistics at my disposal, I know that the average yield of hops in the state as a whole has never been less than from 1,600 to 1,700 pounds per acre, counting of course from one year to another. This showing is in sharp contrast to the yields of all the old hop-growing centers of Germany, England and the United States, where the average crop as shown by statistics does not exceed 600 pounds to the acre.

The cost of the production of hops in the states of Washington and Oregon will compare favorably with the cost of raising this crop in any other part of the world. In Germany the cost of growing hops can no more be computed than can the cost of eggs marketed from the farm, for there hops are grown in small gardens, cultivated and packed by families owning their own ground and who do not even know the average annual yield, to say nothing of the cost of raising them until the crop is marketed after being partially dried in open lofts. In England the cost of raising hops is stated by conservative writers to be not far from an average of 20 cents per pound, counting the cost of tithes, rents, fertilizers, washing, spraying, etc. In New York the cost may be stated at about 14 cents a pound, while in Washington hops can be successfully raised, as shown by careful experiments, at a cost of nine cents a pound. Thus it will be readily noted that the vantage ground in hop culture lies within the limits of the two favored states of the Northwest, at least so far as the cost of production is concerned.

PHOTO BY H. RIEWERT.

PICKING HOPS, PUYALLUP.

The cost of planting hops and stocking the yard with poles after the land has been made ready for the plow, is from $40 to $65 an acre. The cost of providing

suitable buildings, hop-presses, boxes, etc., is about $60 an acre additional. The cost of starting a hopyard on a successful scale is thus seen to be from $100 to $120 an acre. This, of course, is independent of the value of the land, which varies greatly according to quality of the soil and locality. The cost of hop land can be roughly stated, however, at from $40 to $300 per acre.

In the older hop-growing districts of the United States and Europe a newly planted hopyard will yield nothing the first year, but half a crop the second season, and not come into full bearing condition until the third year. From my own experience, gained by hard work in the fields of Washington, I can confidently state that we are sure here of at least half a crop the first year, planting in April and harvesting in October. This would mean at least an average of 800 pounds of hops the first season. From first plantings made in March I have harvested the following October a ton to the acre. The second year all the new plantings yield a full crop in Washington.

The average life of a hopyard in the older districts of the world is not more than 12 years, and by some conservative observers is placed at even less than what I have quoted. In the deep alluvial soils of the best parts of Washington hopyards planted 20 years ago are yet strong and vigorous, and seem to have still a century of life before them. In certain favored spots in Europe where mild climate and deep soils are especially conducive to the best results of hop raising, are hop gardens 150 years old, and I see no reason for expecting any degeneration in the present hopyards of Washington during the lifetime of the oldest hopyards in the old world.

As I have before stated, the average cost of raising hops in this state, put up into bales ready for market, is about 9 cents a pound. This cost is distributed as follows: cultivating, 1½ cents; picking and delivering to the kiln, 5 cents; curing and baling, 1½ cents. Interest and deterioration of perishable property is included in cost of baling and curing. For three years past the hop fields of both Oregon and Washington have been attacked by the hop louse, and great ravages have resulted during the past two seasons from this pest, thus reducing the yield and lowering the quality of the product. Following the example of the English hop-growers, the farmers in this section, in many cases, immediately declared war on the hop louse, and they made extensive preparations for spraying the vines. The cost of spraying adds, on an average, about 1 cent a pound to the cost of raising the crop. The first year of spraying, two horse-power sprayers were brought over from England. These proved too heavy, cumbersome and expensive, and Yankee genius was called upon to perfect a machine that would do the work successfully. A machine was made here which can be manufactured at a third the cost of the English sprayer. It does more than twice the amount of work, and saves fully one-half the emulsion used in the old machine. The consequence is that the dismay and discouragement which met the hop-growers here on the first announcement that the hop louse had come to this part of the world to stay, has given way to one of cheerfulness and confidence, and today, instead of growers talking about reducing their acreage, they show their ability to compete with this destroying agent by making large additions to

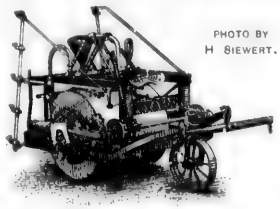


PHOTO BY H. SIEWERT.

PUYALLUP ROLLER SPRAYER, SOLD BY PUYALLUP HARDWARE CO., PUYALLUP.

their hop fields, in both Oregon and Washington. In order to give the reader an intelligent idea of the magnitude of the preparations made here to fight the hop louse, it is only necessary to state that nearly 400 of these horse-power sprayers have been manufactured and sold here in addition to numerous hand sprayers, and 190 tons of quassia wood have been imported from South America with which to "dose" the lice should the pest appear here again. It has been demonstrated, beyond all question, that the crop here can be saved from the ravages of the pest, and this, too, as before stated, at a cost not exceeding 1 cent a pound for spraying.

The net profit of any crop is, after all, the great absorbing question. It matters not how large a yield of any crop the farmer can obtain from an acre of ground, if the crop does not pay he turns his attention to raising something else. The growing of hops has the reputation of being one of the most fluctuating pursuits connected with farming. Of late years there seems to have been more steadiness in the hop market (since the great high-priced year of 1882). Ever since the production of my second crop of hops I have had an abiding faith in the ultimate successful outcome of hop growing. Acting on this assumption, I have regularly increased my acreage in hops with each succeeding year, and I know that this will always continue to be one of the principal and profitable industries of the state of Washington.

Henry Weinhard, the great Portland brewer, after having practically tested my second crop of hops, frankly told me their great intrinsic value, and showed his faith in their worth by purchasing his supply of hops for his brewery from me for 14 consecutive years following. The hops grown in Washington and Oregon, when properly treated, *i. e.*, when they are fully ripened and thoroughly cured at a low temperature, make the best "summer-use hops" in the world. It is this that has made it possible to build up the great export trade in these hops that followed their first introduction in the London market. As before stated, it is because of their keeping qualities that our hops have found such favor in England, and while the climate and soil have much to do in determining the quality of hops grown, yet without proper care in curing, the quality is much impaired, and sometimes, even, entirely ruined for first-class hops.

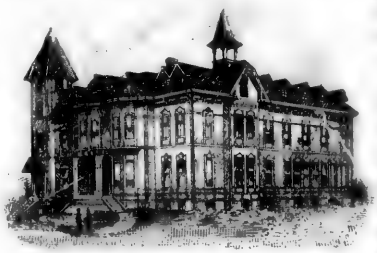
With the completion of the Nicaragua canal, thus cheapening freights to the Old World, or with the lowering of the present rail rates, now abnormally high, to the Atlantic seaboard, the hop fields of Oregon and Washington, with concerted, intelligent action by the growers, are destined to prove a formidable rival to the old fields of Europe, and practically revolutionize the sale of hops. Even today the extent of the hop fields of the Northwest is constantly being increased, but with the lowering of freight charges on exports this industry would suddenly become one of the most important agricultural pursuits on the coast.

Sumner, Washington.—Sumner, Pierce county, Washington, is a town of 1,000 inhabitants as shown by the poll of 279 votes in the election of November, 1892. It is located on Stuck river, between which stream and the Puyallup river at this point only a few hundred yards of meadow land intervene. It is reached by the Northern Pacific Company's road which connects Tacoma with Seattle. The town is 12 miles northeast of Tacoma, two miles north of the main line of the Northern Pacific at Meeker Junction and 29 miles south of Seattle. The products of a considerable part of the rich district of the Puyallup and Stuck valleys find a market place at Sumner, and the place is a trading point of considerable importance.

Hops furnish the great staple product of this section, and a number of very large hop-growers make their headquarters at or near Sumner. The large acreage of the Puyallup and Stuck river valleys is annually being increased, both by the old growers of the section and by new comers. Sumner is essentially a hop town and evidence of this is seen in the patches of towering hop vines which are cultivated in the very yards surrounding Sumner's residences. During 1892, 1,137 bales were shipped from Sumner, a very light aggregate shipment as compared with the total shipments of former years. This falling off in the number of bales handled at this point in 1892 was due directly to the ravages of the hop lice which invaded the hop fields of both Oregon and Washington during that year. Effective means for destroying this pest have now been devised, however, and hop lice in the future will not fare very sumptuously on the growing hops of the Northwest.

Another important industry of the Puyallup and Stuck valleys is the growing of fruit and vegetables for the Tacoma and Seattle markets. The whole country is an ideal truck garden, and the fruits and vegetables grown here vie in size and quality with the best productions anywhere. The soil here is of unknown depths, it is well watered and it is easily cultivated. Strawberries grown in this section photographed side by side with the American dollar, outshine the coin of the realm in size, and their flavor is excellent. Sumner, owing to its proximity to both Seattle and Tacoma, and the means of communication afforded between these places and Sumner by means of the Northern Pacific trains, was chosen as a most available site for the location of the Whitworth College, which is now conducted at the latter point under their auspices.

WHITWORTH COLLEGE.—This is a college open to both sexes, and it is one of the best conducted educational institutions of the state. The curriculum of the school includes classical, scientific and business courses, as well as a preparatory department. Telegraphy, typewriting and short hand are taught at the college, and special attention is also paid to a thorough instruction in vocal and instrumental music, as well as in elocution and art. The charges for tuition and board at the school are extremely moderate, and the attendance at the college is constantly increasing.



WHITWORTH COLLEGE, SUMNER.

The building occupied by Whitworth College is a fine structure, heated by steam, well furnished, and containing all modern appointments and conveniences. The location of the school is particularly favorable. It is on the line of the Northern Pacific railroad, nearly midway between Tacoma and Seattle. The location is in one of the garden spots of Washington, and all the surroundings of the school are healthful and pleasant. The purest and coldest water taken from the foothills of the Cascade Mountains is supplied for college use.

Rev. Calvin M. Stewart, D. D., is president of Whitworth College, and Rev. A. T. Fox, B. L. B. D., is vice-president. Both of these gentlemen have had large experience in educational work, and under their control the institution is rapidly coming to the front as one of the foremost colleges of the Northwest. Parents and guardians will do well to correspond with the officers of Whitworth College with reference to the education of their children of either sex. It is the intention of the

authorities of this college to provide facilities for an education here that will equal in every way the opportunities afforded by the best Eastern colleges, and at a moderate cost.

The public schools of Sumner are conducted in a creditable structure. The system of public instruction at this point is efficient, and the youth of this growing town are afforded by the good public schools of Sumner and in the Whitworth College the means of obtaining a thorough education without being put to the necessity of leaving home.

Kent, Washington.—The town of Kent, named after the leading hop center of Great Britain, is situated in King county, on the Puget Sound branch of the Northern Pacific railroad running between Tacoma and Seattle. It is but 16 miles by rail from Kent to Seattle on the north, and Tacoma is 25 miles distant by rail to the south. Kent is the principal trading point of the fertile White River valley, near the center of which the town is located. The land of this valley is especially adapted to hop culture, and over 3,000 acres of this land are today devoted to the cultivation of this staple product of Western Washington.

The rapid development of the hop industry of the section now tributary to Kent some time since necessitated the establishment of a town of considerable importance at this point. For a considerable time after the town was laid out, the growth of Kent was extremely rapid, and the population of Kent increased within the short space of two months from 700 to 1,500. This growth was due to the luxuriant hop harvests, immunity from hop lice and good prices for the product of the hop fields, together with the efforts to push the town to the front. As an instance of the enormous profits which rewarded the hop growers of this section during the palmy days of the early history of the town the two following cases can be cited: One was where a single hop-grower sold over $14,000 worth of hops from seven acres of land, and the other where the hop yield of 121 acres in this same valley for a single season brought a return of $70,000. With the lower prices for hops now prevailing, and the expense incurred in fighting hop lice, which succeeded in gaining a foothold in this section, hop growing, while still a lucrative calling does not yield the profits of former years, when growers became rich out of a single season's crop. The tendency of this depreciation in prices for the staple product of this section has been to bring trade down to a normal basis at Kent, and where the population of the town was 1,500 a few years ago, it does not today exceed 1,000 people.

The White River valley is adapted to raising all kinds of fruit and vegetables as well as are the rich lands of the Puyallup and Stuck valleys to the south. The section of which Kent is the trading center is rich in resources, and a good town will always be supported at this point. Kent now boasts of a $12,000 school house, three fine brick blocks and a good bank. It supports five churches and has a good system of public instruction.

The King County Fair Association have laid out extensive grounds at Kent, including a one mile kite-shaped track. The stables in connection with the racing track contain 200 box stalls and all necessary equipments. It is hoped to make this one of the prominent racing centers of the state.

Seattle, Washington.—Seattle, the metropolis of Washington, is located in King county, and on Elliot Bay, an indention in the east shore of Admiralty Inlet, the most important part of that great inland body of salt water known as Puget Sound. The phenomenal and unprecedented growth of Seattle, combined with its beauty of location, and the marvelous progressive spirit which its people have always shown, afford incidents for a story unparalleled in the annals of American cities.

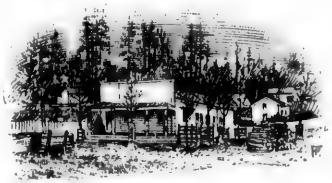
PHOTO. BY LA ROCHE.

CHIEF SEATTLE.
(AFTER WHOM SEATTLE WAS NAMED.)

The events connected with the early settlement of Seattle are but memorable records of the long and hard struggles of courageous, far seeing and ambitious men, who always showed what might be termed almost a sublime confidence in the future of the town they had founded. A notable feature connected with the growth of all the Sound cities is the spirit of loyalty to home interests, which the people here have always shown. The people who live in Seattle are no exception to this rule. A Seattle man firmly believes that his city is destined some day to be one of the greatest centers of population and wealth on the coast, and it may be remarked here that it is this enthusiastic forecast of future possibilities which has been one of the most important factors in the growth of both Seattle and Tacoma. Seattle is an old settlement, but its substantial growth has all been made within a period of eight years, and in this short time a city has been built that in metropolitan appearance vies with San Francisco, and in push and enterprise does not lag behind even Chicago.

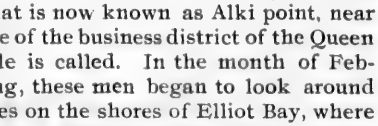
PHOTO. BY MC CLAIRE.

FIRST HOUSE, SEATTLE, BUILT AT ALKI POINT IN 1851.



FRONT AND JAMES STREETS, SEATTLE, 1859.

Prior to 1884, Seattle was a comparatively unknown and isolated town enjoying a small trade with the sparsely settled parts of Washington bordering on the shores of Puget Sound. The history of Seattle dates back to the autumn of 1851, when A. A. Denny, C. D. Boren and the Terry brothers located on what is now known as Alki point, near the present site of the business district of the Queen City, as Seattle is called. In the month of February following, these men began to look around for desirable claims, and they finally selected sites on the shores of Elliot Bay, where Seattle now stands. This was the initial stage of Seattle's future greatness, and thus was the town born. The town was named after a powerful and friendly Indian chieftain, who with his tribe, lived just across the inlet from the new settlement. Soon after the location of the claims by the founders of Seattle, families began to settle around them, and in May, 1853, A. A. Denny and C. D. Boren filed the first plat of the townsite of Seattle. In 1852, Henry L. Yesler had built a sawmill at this point, the first

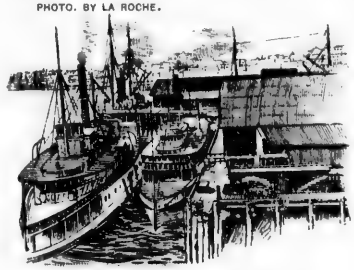


HARBOR, SEATTLE.

steam sawmill on the shores of Puget Sound, and soon after the filing of the first townsite plat, ships began to visit Seattle for the fine lumber which was sawed here. The small colony which settled here soon began to receive accessions to their ranks. Among these early additions was Dr. H. A. Smith, an honored citizen of Seattle at the present time. During 1852 and 1853 the little band here suffered many privations. But few vessels visited the settlement during these years, and as a result provisions were scarce, and the prices asked for the staple articles of every-day consumption were fabulous. Salt pork sold as high as $45 a barrel, and flour brought $35. For a short time during this period of suffering, neither of these commodities could be obtained at any price. During these two years the pioneers of Seattle were hemmed in by impenetrable forests, they lacked all means of commuuicating with the outside world by water, and the general air of confidence in the future which the handful of men never failed to show, was in marked contrast to the loneliness of their position and the prospect for immediate relief.

H. A. SMITH, SEATTLE.

PHOTO. BY LA ROCHE.

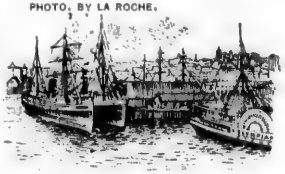


WATER FRONT, SEATTLE.

During 1855 and 1856 the Klickitat and Duwamish Indians caused much trouble in this part of the state. On January 26th of the latter year, the savages after murdering isolated settlers and burning a number of houses, landed in a large body on the western shores of Lake Washington. The people of Seattle sought safety in a stockade, where with the assistance of the government sloop of war, Decatur, anchored in the harbor at that time, they repelled the attack of the savage horde. The war with the relentless Indians continued, however, until the fall of 1856, and during this period of savage warfare, every vestige of improvement in King county was obliterated. While peace reigned after this time, it was not until about 1860 that the people of this sparsely settled portion of the West fully recovered from the depredations committed by the Indians during the two years they were on the warpath.

For the 10 years following the conflict with the Indians, Seattle's advancement was scarcely noticeable. The first important step in the commercial growth of the town was made in 1867, when the wagon road was completed, which opened communication between Seattle and the rich part of Washington lying east of the Cascade Mountains. For the next eight years the people here followed along in the even tenor of their way, reaching out for trade wherever possible, and adding gradually to the wealth of the town. In 1875 an era of great activity in Seattle and the tributary coal districts was inaugurated by the completion of 20 miles of the Seat-

PHOTO. BY LA ROCHE.



WATER FRONT, SEATTLE

PHOTO. BY LA ROCHE.

FRONT STREET, SEATTLE.

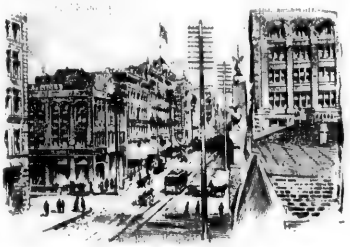
tle & Walla Walla railroad, which tapped the rich coal mines, the product of which is now among the largest and most important outputs of coal on the coast. Soon after this the people of Seattle made strenuous efforts to induce the managements of other lines of railroads to build to this point. An immense sum of money was offered the Northern Pacific to make its western terminus here, but the effort miscarried for reasons which are well understood by everyone who has even a smattering knowledge of the early history of the Puget Sound cities. Denied proper transportation facilities with the interior by rail, the effort to build a city here for a time was an unequal one. A period was finally reached, however, where Seattle's importance as a commercial center demanded attention from the railroads, and it is in the events which led up to making Seattle the great railroad center of Puget Sound, and which will be treated of in a succeeding chapter, that forms the most important part of the city's history.

PHOTO. BY LA ROCHE.

SECOND STREET, SEATTLE.

On January 13, 1882, an event occurred in Seattle which indicated clearly the spirit of the people who had struggled to build a city at this point. For some months previous to that time many dastardly and open acts of violence had been committed by the vicious elements which had found lodgment here. At length the wrath of the people was fully aroused by a most cowardly murder which was committed on one of the main thoroughfares of the town. No time was wasted on making out commitment papers or in serving warrants. On the date mentioned above, the men who had committed this last deed of violence —James Sullivan, William Howard and Benjamin Payne—were lynched in the heart of the city without ceremony. This proved a lesson to wrongdoers, which had a most salutary effect, and it is, perhaps, not necessary to state that a city where the people thus plainly intimated that they would stand no trifling from lawbreakers, enjoyed a long period of safety and security from the open acts of the vicious element.

PHOTO. BY LA ROCHE.



SECOND STREET, SEATTLE.

Another period of disturbance commenced with the agitation against the employment of cheap Chinese labor, during 1885. This agita-

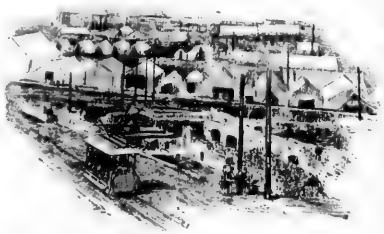
tion finally led to the well-remembered outbreak at Rock Springs, Wyoming, in which much property of the Chinese was destroyed and in which many Chinamen were injured. The feeling against the employment of Chinese finally culminated in the Chinese riots of February 7, 1886, in that city. A large mob had collected for the express purpose of deporting all the Chinese in the city, and in accordance with their preconceived plans of ejectment, the mob took practical possession of the city and commenced the work of removing the Chinese from their houses. The local militia was called out to quell the disturbance, which they finally succeeded in doing after killing one of the mob and injuring a number of other lawbreakers. With the exception of the two cases noted above, Seattle has been singularly free from mob violence, and the people here have always been as law-abiding, and have shown as great respect for the mandates of the law, as have the people in any of the older-settled cities of the United States.

PHOTO. BY LA ROCHE

A PROMINENT CORNER, SEATTLE.

Railroads and water lines of transportation do much to advance the interests of any community. Under the head of "Railroads," in another part of this article, will be found a complete resume of the excellent transportation facilities which Seattle now enjoys, and under this head will be given a history of the struggles which Seattle's people were compelled to make to secure for them the many advantages they now enjoy in perfectly equipped railroad and steamship lines which now touch at this point.

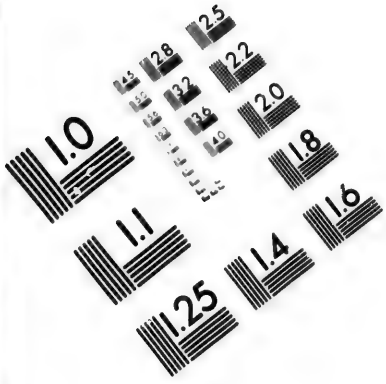
PHOTO. BY LA ROCHE.

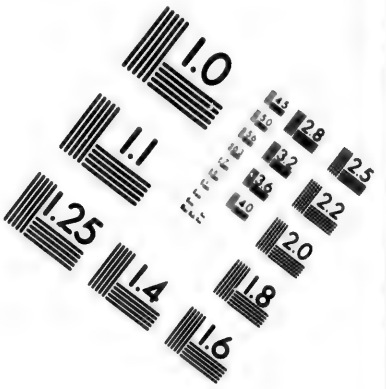


SEATTLE AFTER THE FIRE, 1889.
SOUTH FROM SECOND AND JAMES STREETS.

Following the completion of the railroad which tapped the rich coal mines back of Seattle, the town made steady and substantial growth as a manufacturing point. Sawmills, factories, and other industrial plants sprung up here along the water front, and following the construction of these manufacturing industries came fine business blocks, elegant private dwellings and hotels. People flocked to Seattle from all quarters, and the increase in population was rapid. The suburbs and outlying districts of the city underwent a transformation that converted dense forests into sightly gardens, and on these erstwhile timber lands handsome houses were erected, and the suburbs became the homes of hundreds of contented families. Soon outside capital began to be attracted to the place. Speculation was rife; schemes involving the expenditure of millions were put into operation here, and, as a consequence, the real estate market assumed a stage of feverish activity. No one will dispute that Seattle really enjoyed a boom, but that the city has not suffered in material wealth by the bursting of the bubble must be taken as evidence of the varied resources which have built a city here, and of the latent

THIRD STREET, SEATTLE.





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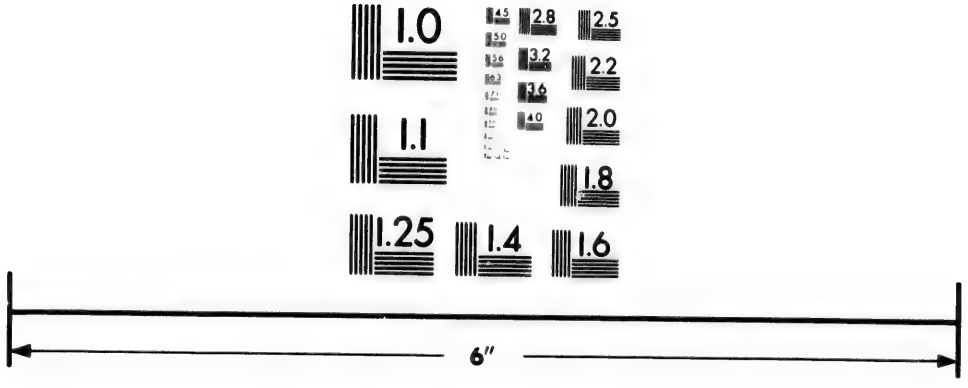

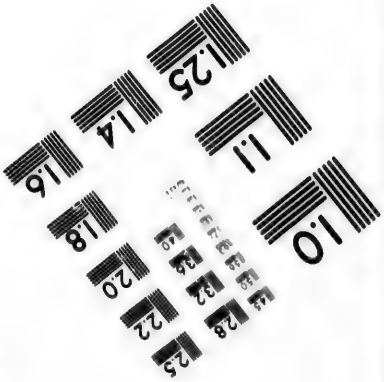

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PHOTO. BY LA ROCHE.

A PROMINENT BUSINESS BLOCK, SEATTLE.

strength of the conditions here for maintaining a city. On June 6, 1889, occurred the ever-memorable fire, which practically destroyed the entire business district of Seattle, burned up a mile of wharves, and involved a loss of over $10,000,000. The burnt district covered an area of 65 acres. The history of Chicago after the great fire, was repeated at Seattle. For a number of months after the holocaust in Seattle the business of the city was done under tents. During this period, however, plans were fully matured for rebuilding the city on a more extensive scale than before, streets and avenues were widened, and in less than 12 months after the city was leveled to the ground, many fine business blocks, of brick and stone, buildings that in architectural design and finish are not surpassed by any of the finest structures of Chicago, were ready for occupancy in Seattle, and the city was once more in the race for supremacy. Seattle's business streets are now built up solid with imposing blocks of brick, stone and iron; the city has fine and commodious hotels within the corporate limits, and miles of well-paved streets, lined on each side with handsome private residences, and the city bears every aspect of a rich and prosperous commercial center and a great shipping port.

The following figures, compiled from sources of unquestioned authority, will show conclusively the wonderful advancement Seattle has made during the past 13 years. In 1870 the United States official census gave Seattle a population of 1,107. The territorial census of 1875 credited Seattle with 1,512 people. The government returns of the census of 1880 found 3,533 souls within the corporate limits of the city. Three years later the territorial canvass showed that Seattle's population had increased to 6,645, and in 1885 another canvass made by the territory gave Seattle a population of 9,786. In 1887 Seattle, on the basis of the names in the city directory of that year, contained 12,167 people, and the city census of the year following found that the population had increased to 19,116. In 1889 another census was taken by the territory which showed that 26,740 people found homes in Seattle. The official government census of 1890 made the city's population 42,837, and the directory of 1893 established Seattle's claim to 58,126 people who lived within the limits of the city.

PHOTO. BY LA ROCHE.

AN OFFICE BUILDING, SEATTLE.

Seattle is now as compactly built as are many of the large cities of the East. The two principal retail business streets, Front and Second, run parallel with the water front, and both these streets are lined with as fine a class of buildings as are found in any city of the West. These buildings are all modern in their appointments and are equipped with fast-running elevators, are lighted by electricity, and are heated by steam. Both of these streets bustle with life and they serve as arteries into which most of the traffic from other parts of the city naturally flows. One and one-half miles of warehouses and wharves extend along the water front. On the water front are also located a large number of leading jobbing houses of the city. The principal business houses of Seattle carry large stocks of goods and the trade which the city enjoys is large and on the most satisfactory of footings.

A number of suburban towns of Seattle, towns under separate municipal governments, are really a part of the city itself. Ballard, Kirkland, Fremont and Latonia are all connected with Seattle by well equipped electric lines of road, and it is only a few minutes' ride to either of these places. At Ballard, on Salmon Bay, five miles distant from Seattle, are located shingle mills whose combined daily capacity is 2,000,000 shingles, while the sawmills at the same place have a capacity of 280,000 feet of lumber a day. Also located at Ballard are a steel mill and extensive yards for the construction of wooden vessels. Covering all of these outside points as well as all the outlying districts of Seattle is one of the most extensive and perfectly equipped rapid-transit systems in the United States. The primitive horse car is entirely unknown on Seattle's streets. Thirteen different cable and electric railway companies, with an aggregate capital stock of $7,470,000, have in operation at Seattle and in the suburbs 34 miles of cable road and 65 miles of electric lines, making a total of 99 miles of street-car tracks covering the city and reaching out from this point. This mileage exceeds that of 23 cities in the United States which have a larger population than Seattle. The city is completely gridironed with a network of tracks, and the remotest suburban point is brought by means of these roads within a few minutes' ride of the business district of Seattle. Five of these lines run north of the city, four lines extend out south, and four lines of road run out to Lake Washington, a fine body of fresh water to the east. Three of the city roads, the Madison Street, Union Trunk, and Seattle City Railway Companies own and maintain splendid parks which are much frequented by residents and visitors to the city. The Rainier Avenue electric line runs in a southeasterly direction and reaches out as far as the south end of Lake Washington. The West Street and North End lines run from the business center of the city in a northwesterly direction along the shores of Elliot Bay to Ballard, 5½ miles distant. The Grant Street line runs to the race track in South Seattle. The Green Lake road runs through Fremont and around the eastern side of Green Lake, which is four miles distant from the city. The Woodlawn Park line follows the same course and terminates on the western shore of Green Lake. The equipments of all these lines are of the very highest order and service is excellent, frequent and rapid trips being made between all points. The following is the capitalization, mileage and number of cars of the different street-railway systems of Seattle:

PHOTO. BY LA ROCHE.

KING COUNTY COURT HOUSE, SEATTLE.

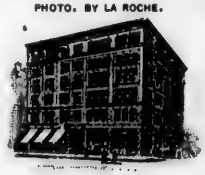
PHOTO. BY LA ROCHE.

YESLER AVENUE, TESMI PARK, SEATTLE.

Front Street Cable Railway Company, capital $600,000, mileage 5, number of cars 16; Grant Street Electric Railway Company, capital $200,000, mileage 7, number of cars 4; Green Lake Electric Railway Company, capital $70,000, mileage 4½, number of cars 2; Madison Street Cable Railway Company, capital $750,000, mileage 7, number of cars 16; Rainier Avenue Electric Railway Company, capital $250,000, mileage 8, number of cars 4; North Seattle Cable Railway Company, capital $500,000, mileage 2 [uses Front street cars]; Rainier Power & Electric Railway Com-

pany, capital $500,000, mileage 6, number of cars 8; Seattle City Railway Company, (Cable), capital $1,000,000, mileage 5, number of cars 16; Seattle Consolidated Railway Company (Electric), capital $1,200,000, mileage 22½, number of cars 30; South Seattle Railway Company (Electric), capital $450,000, mileage 5, number of cars 2; Union Trunk Line (Electric and Cable), capital $1,000,000, mileage 11, number of cars 18; West Seattle Cable Railway Company, capital $150,000 mileage 4, number of cars 4; West Street & North End Railway Company (Electric), capital $1,000,000, mileage 10, number of cars 14. This makes a grand total of $7,470,000 invested in Seattle street railways; 99 miles in operation, on which 134 cars are used.

PHOTO. BY LA ROCHE.



A WELL-KNOWN CORNER, SEATTLE.

In connection with the perfect railway systems of Seattle, something may be said regarding the site the city occupies. Elliot Bay, on the shores of which Seattle is located, has an area of over 20 square miles and furnishes safe anchorage for the largest of deep-water vessels. The city extends back from the bay over a rise of easy grades to Lake Washington, four miles distant. This lake is a magnificent body of fresh water over 20 miles in length and varying in width from 1½ to 3 miles. The streets of the city extending east and west are graded through from Elliot Bay to Lake Washington, terminating on salt water on one end and reaching out to the fresh-water reservoir at the other. In the northern part of the city is Lake Union and beyond this latter body of water in the same direction is Green Lake, both of which while much smaller than Lake Washington, are equally as attractive as the larger body of water.

Seattle is built on a series of terraces rising above the harbor to a considerable altitude. From the crest of the slope is a broad plateau which stretches eastward almost to Lake Washington. It is on the higher terraces and on this plateau that the best residences of the city are built. These homes are far removed from the business activity of the city below and from the sites which they occupy is commanded a view of magnificent scenery not offered to the residents of any city in the Union. Across the harbor from Seattle is seen the long stretch of the waters of Admiralty Inlet, beyond which rise the rugged and snow-capped peaks of the Olympic range of mountains. To the west the view is even more impressive than the panorama presented to the vision of the sight-seer looking west. The tranquil waters of Lake Washington form a fitting foreground to the thickly wooded shores beyond, while far in the distance the eye follows the course of the Cascades for miles, one of the most important ranges of mountains on the continent. Surmounting this chain of mountains, in plain view of Seattle, is the snow-capped peak of Mt. Rainier, one of the monarchs of the Cascades, while to the north, 100 miles distant, rises in plain view the lofty peak of Mt. Baker, which is also covered with perennial snows. The effects of sunrise and sunset over the distant peaks seen from Seattle baffle description. Seattle itself and the country immediately surrounding form one of the most picturesque spots in America. The suburbs present at once a combination of wild and rugged mountain scenery, pastoral landscapes, dense forests and the rippling waves of both tide and fresh water.

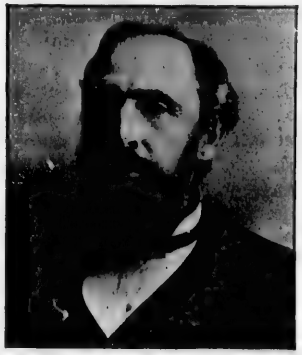
PHOTO. BY LA ROCHE.

COAL BUNKERS, SEATTLE.

Seattle offers many features of interest to the visitor. In addition to the enjoyment of a ride on the numerous car lines of the city, a number of public parks are maintained in which are found great pyramidal trees, high bluffs and deep canyons and extensive and diversified views and vistas through thick forest foliage, the natural wildness of the whole being softened by artificial walks, fountains and flowerbeds. The parks owned by the city cover 64 acres while the private parks open to the public embrace 75 acres additional. Seattle is especially fortunate in having fine public buildings. The King county court house, located here, is a handsome stone structure of the Doric style of architecture, as shown by the illustration accompanying this article. Its cost was about $500,000. It is fitted with safes, vaults and other safeguards for the protection of public records. Seattle has also a fine Chamber of Commerce building, city hall, fine schools, elegant churches and other buildings, which will receive suitable mention under the proper headings in another part of this article.

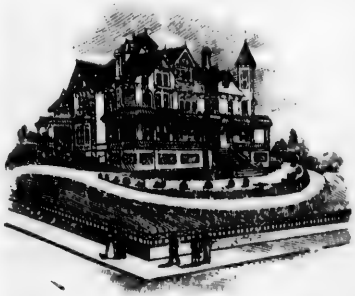
During the history of the King county bar, many brilliant and profound lawyers have been heard pleading before its tribunals, and today it occupies a high place in estimation of the legal profession. Judge John J. McGilvra, one of the oldest and most distinguished practitioners in Washington, is recognized as the father of the Seattle bar. Judge McGilvra was born in Livingston county, N. Y., July 11, 1827. He afterwards removed to Illinois, and was admitted to the bar in Chicago in 1853. In 1861 he was appointed United States attorney for the territory of Washington. After discharging the duties of the office for five years he declined a reappointment. He was also city attorney of Seattle in 1876-7. His greatest legal triumph was in inducing Congress to restore 5,000,000 acres of land for settlement, land which the Northern Pacific Railroad had forfeited.

PHOTO. BY MOORE.



HON. J. J. McGILVRA, SEATTLE.

It is said that the character of the people residing in a city is indicated to a large extent by their homes. If this is true, Seattle possesses many wealthy and cultured citizens, for the many elegant private residences which line its streets will compare favorably with the best homes in the fashionable residence section of any large city. The illustration of the residence of Mrs. Minnie Yesler, the widow of the late Henry L. Yesler, who during his lifetime, was one of Seattle's foremost citizens, is a type of many of the best houses of the city. An illustration of Mrs. Yesler's elegant residence is shown in connection with the present article. In addition to the homes of the wealthy, Seattle



RESIDENCE, MRS. M. G. YESLER, SEATTLE.

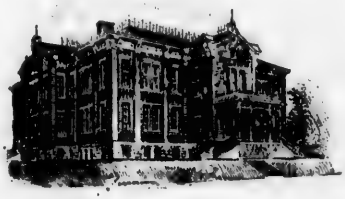
contains hundreds of neat and cosy cottages, occupied largely by the working classes, who enjoy in this Western city, comforts that are denied the laboring man in most of the cities of the East.

Seattle, in keeping with its spirit of advancement, has the best of public school systems. The schools here are in charge of trained and able teachers. The facilities afforded here for obtaining a thorough and systematic education are unexcelled, and in the support of the public schools, the citizens of the city have always manifested a laudable progressive spirit and liberality. In 1887 the city owned but three school buildings, and the average daily attendance of scholars was about 2,000. Today 16 large school buildings are found to be barely adequate to hold the rapidly increasing school population. A large appropriation has been made for the construction of additional buildings for school purposes, and it is expected that before the close of the present year the number of school buildings here will be increased to 20. The present value of the school property of Seattle now amounts to $756,000, divided as follows: buildings, $416,238; real estate, $300,000; furniture, $40,000. At the close of 1893, over 7000 pupils were in regular attendance at the Seattle public schools. In addition to teaching the elementary studies, music, drawing, languages and manual training are included in the curriculum of the public schools here, and in the high school course a thorough collegiate preparatory course is given. The names of the different public schools of Seattle, their cost and average attendance are as follows:

PHOTO. BY LA ROCHE.

OFFICES, BOARD OF EDUCATION, SEATTLE.

PHOTO. BY LA ROCHE.



SOUTH SCHOOL, SEATTLE.

PHOTO BY LA ROCHE.

CENTRAL SCHOOL, SEATTLE.

Central, cost, $85,290; attendance, 1,227; South, cost, $61,950; attendance, 420; Denny, cost, $64,788.65; attendance, 996; Mercer, cost, $34,964; attendance, 712; Columbia, cost, $27,735; attendance, 570; T. T. Minor, cost, $23,750, attendance, 875; Rainier, cost, $35,774; attendance, 556; Olympic, cost, $6,158.88; attendance, 235; Queen Anne, cost, $500; attendance, 40; Randell, cost, $500; attendance, 41; Green Lake, cost, $1,372; attendance, 42; Latonia, cost, $3,720; attendance, 190; Ross, cost, $964.45; attendance, 59; Salmon Bay, cost, $952; attendance, 65; B. F. Day, cost, $24,994; attendance, 348; Pacific, cost, $42,800; attendance, 40; Depot Street, Night and Senior Grammar have an attendance respectively of 69, 201 and 291, making a total attendance of 6,877.

In addition to the public school system, there are a number of important private institutions of learning located at this point. Among these private institutions are excellent Catholic parochial schools and seminaries, a Methodist university, and several academies.

The University of Washington, located at Seattle, is situated on a beautiful tract

of land containing 10 acres, in the heart of the city. Three hundred pupils regularly attend the university, which ranks with the highest seats of learning in the country. By setting aside 10 per cent of the amount collected in fines and licenses the city has provided for a liberal library fund, which has already resulted in establishing a free library. The library now contains about 8,900 volumes, which, with the periodicals and fixtures, have involved an outlay of about $18,400. The income available for library purposes now amounts to about $1,200 a month.

PHOTO. BY LA ROCHE.

DENNY SCHOOL, SEATTLE.

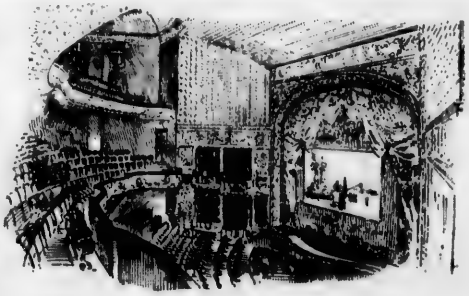
Seattle has a distinctly moral tone. The first church building erected in the town was a modest little structure, put up by the Methodist Episcopal denomination, in 1853. As the city grew the erection of edifices for public worship kept pace with the increase in population, and today the city contains 52 church buildings, with a valuation of church property of $700,000. In addition to the regular churches, an organization of the Young Men's Christian Association is maintained here, with a membership of 500. The latter organization now occupies quarters which, with the ground it stands on, is valued at over $60,000.

PHOTO. BY LA ROCHE.

CONGREGATIONAL CHURCH, SEATTLE.

One of the most noted humanitarian institutions in Washington is located at Seattle, at 604 Columbia street, and also at Spokane. This is the Keeley Institute, where the most desperate cases of the liquor, morphine, opium, chloral, cigarette and tobacco cases are permanently cured in from three to five weeks' time by the administration of the famous double chloride of gold remedies. The Seattle and Spokane institutes are branches of the celebrated Keeley Institute, at Dwight, Illinois. All the medicines used come from the great Keeley laboratory at Dwight, and are administered by skilled physicians, trained for this particular work by Dr. Keeley himself. The great results obtained in the treatment of liquor and kindred habits by the chloride of gold, or Keeley cure, furnishes one of the marvels of the age. Of over 150,000 patients treated in the past eight years, less than 5 per cent have lapsed, and these delinquents have only fallen back to their old habit through deliberation, and not through any desire for stimulants. The Keeley work is the greatest temperance movement ever inaugurated.

Seattle is amply supplied with the best of amusement facilities. In addition to the cheaper places of resort, the city boasts of one of the finest and best appointed opera houses on the coast. This is the Seattle theater, which is under the management of Mr. John W. Hanna. This is one of the neatest and most thoroughly equip-



INTERIOR, SEATTLE OPERA HOUSE.

ped opera houses in the West. The building is situated on the corner of Third and Cherry streets. It has a frontage of 80 feet, and is five stories high. The architectural design is after the Italian-Renaissance style, which is carried out in buff pressed brick, with stone trimmings. The interior is elaborately decorated. The floors are of tile, the windows of stained glass, and the interior woodwork is all finished in quartered oak. The chairs in all parts of the house have leather seats and plush backs. The decorations of the proscenium arch, foyers, boxes and the fronts of both the balcony and gallery are done in a very artistic manner, and the colors used are all in harmony with the interior fittings of the theater.

The stage is 80x40 feet in size, and is fitted with the most approved mechanical accessories. Mr. Hanna books the very best companies, and his efforts receive substantial encouragement from the amusement-loving public of Seattle.

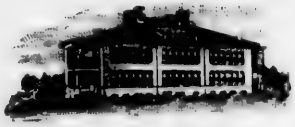
T. T. Minor School, Seattle.

Seattle has now reached a position from which, judging by the growth of other cities, there can be no retrogressive movement. The era of wild real estate speculation here is past and the city now depends on the development of the matchless resources of the tributary section for future advancement. Even during the dull period of the past two years Seattle has continued to increase in both population and wealth, and the city is now on a stronger footing than it ever was before. The number of buildings which have been erected here since the fire furnish satisfactory evidence of the substantial growth of the city during the past four years. From July 1, 1889, to July 1, 1893, 6,358 brick, stone and frame buildings were erected in Seattle at a cost of $13,892,450. Considerable activity in building is now noted in Seattle, especially in the jobbing district where the increased trade of the city makes the demand for additional quarters an imperative one.

Many improvements of a public nature are now nearing completion in Seattle. Work on the most important of these improvements has not yet been inaugurated. This is the construction of a short ship canal to connect Puget Sound with Lake Washington. Congress has for a number of years past had this measure under advisement and it is believed that the government will soon make an appropriation for building this canal. When this great enterprise shall once have been carried to a successful termination Seattle can justly lay claim to having the finest harbor facilities in the world. Lake Washington has a shore line of over 100 miles, and it presents a sufficient area of surface to float all the ships that will ever visit the Pacific coast. With the completion of this canal Seattle will possess the advantage of a double harbor, the salt waters of Elliot Bay touching the city on the west and the deep fresh waters of Lake Washington on the east forming excellent ingress to that part of the city. The advantages of a fresh-water harbor for salt-water vessels are fully appreciated by all sea-faring men, and in the minds of men who engage in shipping, Seattle's claim for national supervision of the great work of digging this canal is one that demands the most earnest consideration of the government.

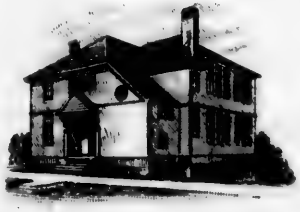
Day School (Fremont), Seattle.

SOME OF SEATTLE'S SCHOOLS.



PACIFIC SCHOOL.

RAINIER SCHOOL.



OLYMPIA SCHOOL.

PHOTO. BY LA ROCHE.

MERCER SCHOOL.

COLUMBIA SCHOOL.

Seattle contains 90 miles of graded streets, 30 miles of which are planked. The average width of the streets is 66 feet, but some of the main thoroughfares are wider than this, some of the principal avenues being 86 feet wide. The width of sidewalks is from 8 to 12 feet, and in the principal business district most of the sidewalks are of stone. Seattle is now expending over $200,000 in perfecting the sewerage system, and a large sum of money is also being expended in the opening and grading of new streets.

Seattle, following the course pursued by other wide-awake cities, now owns and operates a fine water-works system. There has been expended on this plant to date the sum of $1,250,000. The supply of water is obtained from Lake Washington, on the shores of which reservoirs and pumping stations having a daily capacity of 10,000,000 gallons are located. The water, which is of the purest quality, is distributed through the city by means of 94 miles of pipes.

PHOTO. BY BRAAS.

FIRE DEPARTMENT HEADQUARTERS, SEATTLE.

PHOTO. BY BRAAS.

ENGINE HOUSE NO. 3, SEATTLE.

Just after the great fire of June 6, 1889, the citizens of Seattle commenced the work of reorganizing the city fire department. In the efficiency of its members and in appliances for fighting fire Seattle's fire department ranks with the best of the country. The paid department, which was created in 1890, occupies six handsome and commodious engine houses, and on the harbor is kept a fire boat to protect the heavy shipping interests along the water front. During 1892 the maintenance of this department cost $92,000. The total valuation of the property belonging to the fire department of the city is $299,452. The fire equipment is as follows: one fire boat, six steamers, six hose wagons, one hose carriage, one aerial truck, one hook and ladder, three chemical engines, one supply wagon. The total number of full-paid men on the force is 75.

The lighting of the city at the present time is done by a private company who furnish an excellent service. Electricity is used for lighting purposes and arc or incandescent lamps are found on every corner in the city proper and in its suburbs. There are in use in Seattle 16,000 incandescent lamps of 16 candle power each and 1,290 arc lamps of 2,000 candle power each. Of this number 115 arc and 600 incandescent lamps are used for street lighting.

PHOTO. BY BRAAS.

FIRE BOAT, SEATTLE.

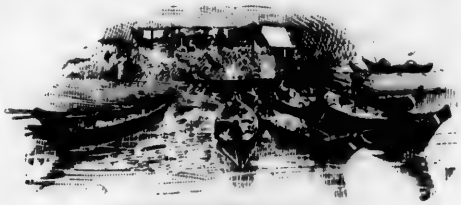
The early railroad history of Seattle is replete with bitter disappointments, long and vexatious delays, antagonism and discrimination. These obstacles, however, were all in time surmounted, and this, too, without outside assistance, and the city with its unexcelled location and commercial importance, has forced every railroad, operating lines in Washington to enter Seattle and compete for a share of the patronage of the city.

For 10 years Seattle practically lived upon the hope that the Northern Pacific would make this city its western terminus, but when the tracks of this road finally reached Puget Sound in 1883, it halted at Tacoma. This was a sore disappointment to Seattle, but with an enterprise seldom paralled, its people set to work to build a railroad themselves. This resulted in the construction of a short line of road, but before the system was completed it was absorbed by the Northern Pacific. In 1886 the Northern Pacific completed its line across the Cascade Mountains which furnished direct connection between Eastern Washington and the East with Puget Sound. At the same time the road made arrangements for entering Seattle by constructing a short line of road from the main line north to Stuck Junction, where connection was made direct for Seattle by a track which had been built by another company. This gave Seattle its first through transcontinental line of road. Following in the wake of the Northern Pacific other great railroad companies began to turn their eyes toward Seattle. The year 1893 witnessed the completion of the Great Northern railroad from St. Paul to Seattle, its western deep-water terminus. This road opened up the vast agricultural belt lying in Washington east of the Cascades as well as the wonderfully rich mineral and timber belt west of the

SNOQUALMIE FALLS, NEAR SEATTLE.

mountains, resources that have already added greatly to Seattle's prosperity. The Great Northern has already invested large sums of money in obtaining proper terminal facilities at Seattle and the company is also building a line of steamers to ply between Seattle and the Orient.

The Canadian Pacific railroad gains an entrance to Seattle from Sumas, B. C., over the Bellingham Bay & British Columbia railway to New Whatcom, and from this latter point over the Sound branch of the Great Northern. The Columbia & Puget Sound railroad connects Seattle with the rich coal-mining districts of Franklin, Black Diamond, Newcastle and Talbot and the Seattle, Lake Shore & Eastern running through the rich agricultural district east of the city forms a connection at Snohomish with the line of the Everett & Monte Cristo railroad which extends from Everett on the lower Snohomish river into the great gold and silver-producing regions of Silver creek and Monte Cristo. The Seattle, Lake Shore & Eastern road also handles the hop product of the Snoqualmic valley, the output of the iron mines in Skagit county and is also the outlet for the rich coal mines of Gilman. It will be seen from the above statement that Seattle is already a railroad center of considerable importance. The city now has direct connection with the East by three lines of transcontinental roads and direct communication is afforded with Tacoma, Olympia, Portland, all Sound points and the towns of the interior by a network of branch lines of roads which now makes Seattle the most important railroad center of the Puget Sound country.



INDIAN CANOES LANDING SEATTLE.

Seattle also has the best of transportation facilities by numerous lines of ocean and sound steamers which connect with all points reached by water. Large and fleet steamers ply regularly between Seattle and San Francisco, Victoria and Vancouver, B. C., and Portland. A line of steamships also operates between Seattle and the Alaska ports. Commencing some time during the present year the Great Northern Railway Company will operate a line of large passenger steamships between Seattle and China and Japan. Steamers, including side-wheel, stern-wheel and propeller, run from Seattle to all ports on Puget Sound, the service between the Queen City and the largest ports giving frequent trips and very fast time. Some 220 sailing vessels are now regularly engaged in the carrying trade between Seattle and outside ports and the export trade now reaches a large volume yearly.

Passengers and tourists arriving in Seattle will find a perfect baggage and carriage system operated by the Seattle Transfer Company. This company handles all the big excursions from the East, and also has messengers on board all incoming trains and boats to exchange checks with passengers and to see that baggage is forwarded to its destination without causing the owner the least inconvenience. The company operates 20 Gurney cabs, 10 hacks, 6 baggage wagons and 15 drays and trucks, and owns terminal facilities consisting of three large warehouses.

Great cities are produced by the commerce they enjoy, and any place favorably located to command trade and enjoy exceptional facilities for handling a large jobbing and shipping business, has all the potency of greatness. Seattle's location is not only favorable for commanding a considerable share of the shipping trade

which frequents the waters of Puget Sound, but the vast section of country tributary to the city has sources of natural wealth as great as they are diversified. It is estimated that the forests of Washington contain no less than 250,000,000,000 feet of merchantable timber. Of this timber belt a considerable part is directly within easy reach of Seattle, and the amount of timber found in the forests tributary will not be exhausted by constant sawing for scores of years in the future. Vast as are the extent of the timber resources of the country back of Seattle, the wealth to be derived from cutting this timber will doubtless hardly equal the money which will be obtained from the development of the great mineral resources of this same district. The coal mines of the Puget Sound basin are already a great source of wealth to Western Washington. The largest and best developed coal fields in the state are in King county, of which Seattle is the judicial seat and the leading jobbing center. These fields cover an area of about 400 square miles. The total output of the King county coal mines, in 1892, reached the enormous total of 484,000 tons. Outside of the limited output of a few mines in Oregon and California, almost the entire supply of the Pacific coast comes from the mines of Washington, and a considerable part of this coal is shipped direct from Seattle.

Over 1,500 tons of coal are received daily at the bunkers in Seattle, and the shipping of this coal gives steady employment to a large fleet of coasting vessels. A detailed and comprehensive description of the coal, mineral and timber wealth of Western Washington will be found in another part of "The Handbook."

PHOTO. BY LA ROCHE.

SHIPPING AT PORT BLAKELY.

Seattle is the distributing point and base of supplies for the great gold and silver-producing districts of Silver creek, Monte Cristo and Snoqualmie. These mines are only partially developed, but enough has already been done in these fields to show conclusively that they, in time, will rank among the most important mines in the West. Mining in these districts can only be carried on through the agency of expensive machinery, but the fact that thousands of dollars have already been expended on these properties, shows that the owners have every reason to believe that their investments are judiciously made.

During 1892, 222 ocean steamships, of a gross tonnage of 280,580, visited Seattle, and during the same year 138 sailing vessels, of a gross tonnage of 103,768 anchored in the harbor in front of the city. In 1892 the imports received at Seattle, from ocean-carrying vessels, amounted to 67,297 tons, and the exports reached 208,333 tons. During the same time Seattle shipped to ocean ports 43,151,000 feet of lumber, and 196,146 tons of local merchandise were handled at Seattle's docks and wharves.

The volume of business handled by the railroads entering Seattle is great, and exclusive of the traffic of the Great Northern, which has not been completed a sufficient time to furnish reliable information on this subject, these roads forwarded, during the first four months of 1893, 313,435 tons of freight. This included 136,211 tons of coal. In pro-rating the business handled by these roads for the entire year of 1893, fully 20 per cent should be added for the increased traffic of the Great Northern and the increased business of the other roads during the latter part of the year.

The following information of the manufacturing and jobbing interests of Seattle is cumulative to the foregoing evidence of the city's commercial standing and of its wealth.

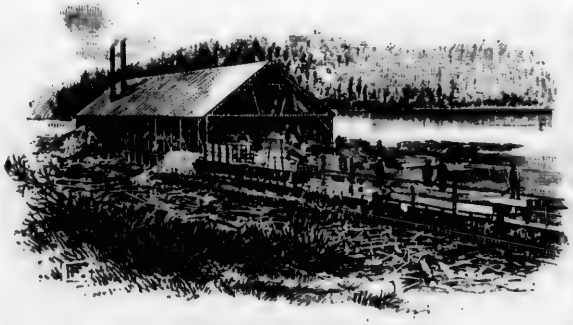
The manufacture of lumber and shingles is, at the present time, the most important of the growing industries of Seattle. The increasing Eastern demand, together with the home consumption of Washington fir and cedar, taxes the mills of this city to their full running capacity, and hardly a month passes without noting the erection of a new lumber plant at this point. It is estimated that King county alone has 448,000 acres of standing timber, and that 60,000 acres only have been logged over up to the present time. There are now eight logging companies operating in this county. The output of these camps in 1892 was 67,500,000 feet, the average value of which was $4 per thousand feet. These companies employ 482 men, and during 1892 their aggregate pay-roll amounted to $161,000.

Of the 32 sawmills and shingle plants located in King county, 21 are claimed by Seattle. These plants are valued at $1,201,110. The total output of these mills in 1892, was as follows: 209,163,500 feet of lumber, 10,679,000 laths, and 405,630,000 shingles. The 946 men employed in these mills during the same year received in wages the sum of $520,000. The cut of these mills during 1893 and 1894, was and will be largely in excess of what it was in 1892. In June of last year the lumber and shingle plants of Seattle had a daily capacity of 765,000 feet of lumber and 2,380,000 shingles. The following are representative mill and lumber firms of Seattle:

PHOTO. BY LA ROCHE.

NEWELL'S MILL, SEATTLE.

The Newell Mill Company was established on a small scale in 1881, by George Newell, who arrived in Seattle 15 years ago, with only $8 in his possession. By strict attention to business details, however, he has, since that time managed to build up a large and valuable sawmill and sash and door factory. The sawmill has a capacity of 45,000 feet daily, and the sash and door factory is one of the largest in the state. The plant occupies 53 city lots, and includes a large boarding-house for the employes, and also a number of cottages. Mr. Newell is a thorough and practical business man, and he successfully manages the enterprise of which he is the head. Shipments are made by this company to local and foreign forts.



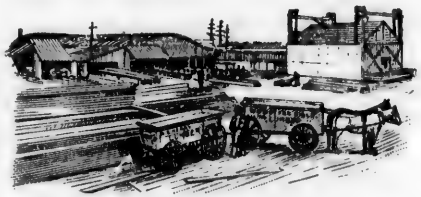
ALLEN & NELSON MILL CO.'S SAWMILL, MONOHAN.

A representative Washington lumber firm having excellent facilities for handling large Eastern orders and making prompt shipments, is the Allen & Nelson Mill Company of Seattle. The company's plant is located at Monohan on Lake Samma-

ish. A modern sawmill with a capacity for cutting 50,000 feet of lumber per day has just been completed and the mill is now running up to that output. The company owns a large tract of fine timber land adjacent to the lake from which logs are floated to the mill, thereby reducing the cost of lumber production to a minimum. Although this company does a large local business and also operates a retail yard at Snohomish, the bulk of its trade is done with Eastern buyers. This is one of the most important lumber firms of Seattle.

The handling of the lumber business of Seattle is not by any means entirely in the hands of the old element, for a number of bright and energetic young men are engaged in operating sawmills here. One of the most prominent of these is A. S. Kerry, proprietor of the perfectly equipped sawmill located at the foot of Charles street. This mill furnishes employment to 60 men and has a daily capacity of 60,000 feet of lumber. The manufactured product consists of all kinds of lumber, shingles, laths and mouldings. The plant is built on a wharf projecting into the Sound, thus enabling vessels to load direct from the mill and also facilitating the handling of logs. Consignments of lumber are shipped from this mill to all sections of the East and a large business is also done with local points.

PHOTO. BY LA ROCHE.



SAWMILL, A. S. KERRY, SEATTLE.

Among the important industrial plants at Seattle is the large wood-working factory owned and operated by the Holmes Lumber Company. The factory occupies an advantageous site on the shores of Lake Union. From it a dock projects into deep water, at which the steamboats that ply on the lake receive and discharge their cargoes.

The Holmes Lumber Company manufacture sash, doors and mouldings, and all kinds of finishing lumber, counters, shelving, brackets, turning, etc. The company have built up a large outside business, and are prepared to fill large orders for shipment for which they have ample facilities. Marcus M. Holmes, the president of the company, has for some years been prominent in business and public life at Seattle. All business transacted by the company is attended to by Mr. Holmes in person.

Among the other manufacturing establishments of Seattle are iron works worth $310,000, whose output for the year 1892 amounted to $657,000. In the manufacture of carriages and wagons there is $48,000 of capital invested, and the output of these plants is $96,000 a year, and they employ regularly about 75 men. Planing mills, separate from the lum-

PHOTO. BY LA ROCHE.

HOLMES LUMBER CO., SEATTLE.

ber industries, turn out work annually to the value of $1,600,000. In the 16 establishments engaged in cigar manufacturing 65 men are employed and 5,000,000 cigars, valued at $195,000, are turned out annually. The output of the Seattle furniture factories is valued at about $198,200. About $200,000 in capital is employed in the butchering business. This industry pays out about $72,000 a year in wages and the value of the annual output is about $1,145,813.

Another great industry in Seattle and in the immediate suburbs is the manufacture of brick, tiling and pottery. A fine quality of potter's clay is found in the vicinity of the city. One large concern engaged in this business here employs 80 men and is now turning out large quantities of terra cotta goods and ornamental pottery ware. There are also about 50 brick yards in and near the city. These industries employ 900 men and their output reaches about 120,000,000 brick per annum. The value of this annual product is over $1,400,000.

Seattle's manufacturing enterprises, large and small, number 236. The aggregate capital invested in these plants is $5,110,000, and the value of the product in 1893 [approximate] reached $11,942,000.

While Seattle has for many years past been a great emporium for retail and jobbing trade, it may be stated that the wholesale business of the city has just begun to assume proportions of any considerable magnitude. The volume of the business transacted by the 95 jobbing houses of Seattle during 1893 has shown a most marked increase over the business of the previous three years. The aggregate capital now employed in these houses is about $5,200,000. Their trade for 1893 was approximated at $16,500,000. The leading jobbing houses of the city are located on the water front where they are afforded unexcelled facilities for making and receiving shipments, goods being landed at and shipped direct from their doors by either water or rail.

The waters of Puget Sound, the rivers which empty into this inland body of water and the banks of the Pacific ocean off the Straits of Fuca abound in numerous varieties of the finest food fishes. In the Sound and in the rivers which flow into it large catches of salmon are made each year, and fishing for cod, halibut, herring and other fishes forms one of the leading industries of the Sound country at the present time. These fish are landed in Seattle a few hours after they are taken from the water, and from this point they are shipped for hundreds of miles inland. The total shipments of fish from Seattle during 1893 amounted to about 1,810,000 pounds. During the same year one cannery in operation on the Sound turned out a pack of nearly 25,000 cases.

At West Seattle, which lies just across the bay from Seattle proper, a large grain elevator has been erected which has a capacity of 2,000,000 bushels of wheat. The largest sea-going vessels find easy anchorage alongside this warehouse, and ships are loaded direct from the elevator. This concern shipped about 1,300,000 bushels of wheat in 1893. Owing to the inequalities of freight rates it has only been recently that the grain of Eastern Washington has sought an outlet at Seattle, but as rates by rail for grain shipments have been satisfactorily adjusted to favor Seattle the grain shipments from this port are rapidly increasing, and this is fast becoming one of the principal points of the coast for the handling of wheat in large quantities.

The substantial basis upon which the business of a city is transacted is best evidenced by the number and soundness of its financial institutions. There are in Seattle today 20 banks with an aggregate capital of $2,830,000. The individual banks of the city make the following showing :

Dexter Horton & Co., capital, $200,000; First National, capital, $150,000, surplus, $150,000; undivided profits, $50,000; Puget Sound National, capital, $300,000; surplus, $60,000, undivided profits, $48,000; Boston National, capital, $300,000; surplus, $16,750; undivided profits, $45,000; Merchants National, capital $200,000; surplus, $24,000, undivided profits, $25,000; Commercial National, capital, $100,000, surplus, $10,500, undivided profits, $10,000; Seattle National, capital, $250,000, surplus, $6,000, undivided profits, $18,400; Washington National, capital, $100,000, surplus, $20,000, undivided profits, $36,000; National Bank of Commerce, capital, $300,000, surplus, $12,500, undivided profits, $15,000; British Columbia [branch], capital, $3,000,000 (estimated); Guarantee Loan & Trust Co., capital, $200,000, surplus, $25,000, undivided profits, $10,900; Seattle Savings, capital, $50,000; Peoples Savings, capital, $100,000, surplus, $24,117, undivided profits, $20,000; Security Savings, capital, $50,000; Seattle Dime Savings, capital, $50,000; Washington Savings, capital, $100,000; Scandinavian American, capital, $75,000, surplus $6,000: North End, capital, $50,000; Filkins Banking Company, capital, $55,000; Puget Sound Savings, capital, $100,000, surplus, $3,600.

Of these banks it will be noticed that eight are national, six are private commercial and six are savings banks. The number of savings banks in Seattle indicate a thrift and industry of the working people of the city that is commendable.

The oldest bank in Seattle is that of Dexter Horton & Co., founded in 1870, and the most recently organized bank is the Security Savings, which began business June 1, 1892. On June 1, 1893, the total deposits in the Seattle banks were $7,354,367, an increase since June, 1888, of $3,810,367.

That Seattle is one of the great financial centers of the West is shown by the statement of the business transacted through the clearing house by months for the year ending April 30, 1893. The clearances by months were as follows:

May, 1892, $5,405,574.70; June, $5,110,598.67; July, $4,925,978.68; August, $5,460,124.25; September, $4,670,361.69; October, $4,614,844.55; November, $4,786,878.32; December, $5,284,472.02; January, 1893, $4,798,369.82; February, $3,923,712.13; March, $5,016,136.93; April, $4,563,440.64. This made a total of $63,560,592.40 for the entire year. The above clearances are considerably greater than those of other cities with a population equal to that of Seattle. There has never been a bank failure in Seattle, and while the banks here are exceedingly liberal in supporting any enterprise that will materially benefit the city, on the whole they transact business on a safe and conservative basis.

BANK OF DEXTER HORTON & CO., SEATTLE.

The banking house of Dexter Horton & Co., has always stood at the head of the financial institutions of Washington. It was founded in 1870 by Dexter Horton and David Phillips with a capital of $50,000, and it remained a private bank until 1887, when it was incorporated as a state bank and the capital stock was increased to $200,000. At that time W. S. Ladd was president, A. A. Denny, vice-president and

J. H. Hoyt, manager. In 1887 the latter gentleman resigned and N. H. Latimer was chosen manager in Mr. Hoyt's place. For 10 years this was the only bank in the city and it is today the only bank occupying its own building. This building is an imposing and costly structure, six stories in height, of a handsome architectural design and equipped with every modern convenience.

The finances of the city are in an excellent condition. Its bonds command a premium in the money centers of the East, and its indebtedness is comparatively low, being limited by the charter to five per cent. of the total assessed valuation of city property, with an additional five per cent. if approved by the citizens. On January 1, 1893, the interest-bearing debt of Seattle amounted to $3,117,730. Of this amount $520,180 was a floating debt, and the remainder was bonded. The following figures showing the assessed value of property in King county are interesting, especially when it is remembered that a few years ago the county was an almost unbroken wilderness, and that even today its vast resources are just beginning to be developed. The assessed value of property in the county as equalized by the state board in 1892 was as follows: railroads, $1,248,056; personal property, $6,961,225; real estate, $39,801,571; improvements, $8,718,180, making a total of $56,720,036, of which $43,852,085 was the assessment of property located within the corporate limits of Seattle. This is a remarkable increase over the assessed valuation of property in the county in 1890, which then amounted to $26,431,455.

The post office receipts show a corresponding increase. In 1885 there was received at the Seattle post office $14,076. In 1890 the receipts amounted to $77,298, and in 1892 the receipts footed up to $97,216.

The Seattle Chamber of Commerce with a membership of 300 energetic business men has done much to advance the city's welfare. It makes itself a clearing house of information on Seattle and its resources, and any letters addressed to the Chamber regarding Seattle, or the country of which it is the chief commercial center, will be cheerfully and promptly answered.

Of Seattle hotels, doubtless the Hotel Northern is the one best patronized by commercial men and tourists. It is located in the business heart of the city, conveniently near all depots, docks, theaters and street-car lines. The appointments of the hotel are of the best. The rooms are large and richly furnished. The hotel is supplied with elevators, steam heat and all modern conveniences. The dining room is on the top floor. The superior service and excellent cuisine of this hostelry have won for it a wide popularity.

The proprietors of the Hotel Northern, Messrs. Dodge & Smith, are well known in hotel and business circles. The senior member, Mr. John W. Dodge, was until recently the secretary of the Seattle Chamber of Commerce. Mr. Smith is known to the traveling public as the former steward of the Ebbitt House, Cincinnati, and of the Washington Park Club, Chicago.

This ends a brief and summarized description of Seattle. That the future of the city is bright is not questioned by those who know anything of the possibilities for the future growth of the entire Puget Sound country. With the hidden stores of wealth in timber, coal, iron and other metals, in the agricultural stretches of the interior, and with the matchless opportunities for building up a great maritime trade, Seattle must always rank among the great cities of the coast, and there is every reason for believing that a few years hence will see here one of the great seaport cities of the United States.

The illustrations of scenery, buildings and industrial plants in "The Handbook" were made from original photographs, and while great credit is due the respective photographers for their artistic work in taking these views, some credit is also due Messrs. C. W. Parker & Co., of Seattle, dealers in photographic supplies, for the materials furnished, which allowed these excellent negatives to be taken. This firm furnishes nearly all the photographers in Washington with the material that enables them to turn out such excellent work, and the firm also carries a complete stock of cameras and amateur outfits.

Ballard, Washington.—Ballard is in King county, Washington, five miles distant from Seattle. It is situated on the arm of Puget Sound known as Salmon Bay, and has a deep-water frontage one mile long, the depth of water along this front varying from 14 to 25 feet. In view of the great canal which is to connect Puget Sound with the fresh waters of Lake Washington, work on the construction of which will soon be commenced, Ballard may be appropriately styled the "Gate City." All vessels entering this canal must first pass through Ballard's harbor. The construction of the canal will materially deepen the water at Ballard's docks, and the completion of this great work will be of the most signal benefit to the city. Salmon Bay itself is completely landlocked, and it affords one of the safest harbors for the anchorage of shipping on the coast.

A. E. PRETTY, MAYOR OF BALLARD.

Ballard enjoys the best of transportation facilities. In addition to its fine water approaches, it is on the main line of the Seattle, Lake Shore & Eastern railroad, and is also passed by trains over the Sound division of the Great Northern. It is connected with Seattle direct by an electric road, which runs cars for passengers between the two points every 20 minutes during the day, and which runs freight cars as required. The franchise and right-of-way for another electric road to connect Ballard and Seattle have been granted, and this latter road will probably be in running order by the time this book goes to press.

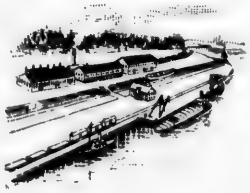
Although Ballard is but five miles distant from Seattle, it is more than a suburb of the city. Ballard is incorporated and has a present population of over 2,000. It is one of the most important manufacturing points in the state. Considerable ship building has been done at this point, and the fastest and best appointed sternwheel steamer in the world, the Bailey Gatzert, so well known in Pacific coast waters, was built here by the late Captain J. J. Holland, at a cost of $90,000. Among the large number of manufacturing establishments at Ballard, the following are particularly prominent: the West Coast Manufacturing & Investment Company; the Seattle Cedar Lumber Company; the Stinson Lumber Company; the Auld & Johnson and Fleming & Ayers lumber mills. The aggregate output of the lumber mills of Ballard, for 1892, amounted to 31,400,000 feet of lumber, and during the same time 192,955,000 shingles were produced at the same place.

Ballard is distinctively a progressive town. In 1890 the official census gave Ballard 1,178 inhabitants. It is suggestive of enterprise on the part of its citizens and its natural advantages, that during the past two generally dull years, the population of

the place has nearly doubled. Ballard now has a good double water-works system, water for protection against fire being drawn from the bay, while clear mountain spring water, for domestic use is supplied here in ample quantity for all demands. Ballard has a fine schoolhouse, erected at a cost of $20,000, and the public schools here are presided over by good teachers. The city is lighted by electricity, has well stocked stores, and bears every evidence of prosperity. The present city officers, under whose fostering care Ballard's most substantial progress has been made, are: A. E. Pretty, mayor; John Keene, treasurer, and H. B. Pederson, assessor.

Everett, Washington.—Everett is located in Snohomish county, Washington, on a peninsula 1½ miles wide, lying between the salt waters of Puget Sound, and Port Gardner on the west and the Snohomish river on the east. It is one of the terminal points of the Great Northern railroad line on Puget Sound. The distance to Everett from St. Paul, the eastern terminus of the road, is 1,772 miles, about 130 miles shorter than the distance between St. Paul and Tacoma by the Northern Pacific. Everett is reached from the south by the Seattle & Montana branch of the Great Northern, this latter line connecting Seattle, 33 miles distant on the south, with South Westminster, British Columbia, on the north. Everett is also the terminus of the Everett & Monte Cristo railroad, which connects Everett with the very rich Monte Cristo mines. An electric road, seven miles in length, connects the western, or bay side of Everett, with the eastern, or Snohomish river side. This line affords rapid-transit facilities between the city and the barge works to the north and the paper mill at Lowell, two miles south of Everett. Several lines of steamers also ply regularly between Everett and Seattle and between Everett and all Sound ports.

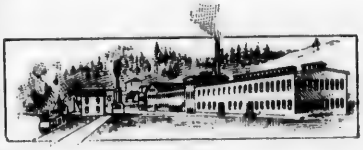
A Scene at Everett.



Docks and Works, Everett.

Everett was not in existence at the time the government census was taken in 1890, the townsite plat not having been filed until September, 1891. When incorporation was effected in March, 1893, the population of the place was estimated at 5,200. This population was on a basis of 2½ persons for every male name in the carefully prepared directory of Everett issued by the well-known directory publishers, R. L. Polk & Co., in January of that year, and the estimate is believed to be both conservative and reliable.

Everett is essentially a manufacturing town. The Pacific Steel Barge Company have a large plant at Everett for the manufacture of the whaleback steamships. They have $600,000 of invested capital and their plant here represents an outlay of $250,000. They are now employing about 200 men. The Puget Sound Wire Nail & Steel Company, also located at this point, have a capital of $400,000, and they have invested in their plant $300,000. The output of the nail works is one carload of nails a day. The Puget Sound Pulp & Paper Company of Everett, have a capital of $500,000. They have invested in their plant $400,000, and their plant is now kept running

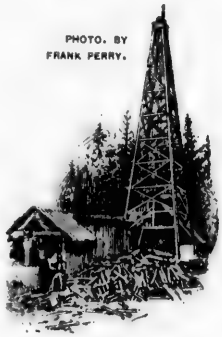


A Factory at Everett.

day and night. In addition to the above important works, the Sumner Iron Works at Everett, have a capital of $25,000, and are doing a large local business, and the Puget Sound Reduction Company employ regularly about 125 men and are on a strong financial footing. The aggregate capital now invested in the different manufacturing industries at Everett reaches the grand total of $1,881,000.

During the past two years a number of very fine buildings have been erected at Everett. Prominent among these fine structures may be mentioned the Clark block, erected at a cost of $35,000; a public school building which cost $30,000; the Wisconsin block, the erection of which involved an outlay of $25,000; the Slack block, on which $25,000 was spent; the Mohawk block, which represents an outlay of $25,000; the Hewitt block, which cost $20,000; the Swalwell block, at a cost of $30,000; the Craddock block and the Chamber of Commerce building, each of which cost $20,000. In addition to the buildings enumerated above, a large number of buildings have been erected in Everett during this same time at a cost of from $5,000 to $15,000, and in this same short period of two years Everett has emerged from the chrysalis state of a mere hamlet to its present important position as one of the most promising cities of the Puget Sound country.

Snohomish, Washington.—The city of Snohomish is located in the rich valley of the Snohomish, through which flows the river of the same name, 38 miles north of Seattle by the Seattle, Lake Shore & Eastern railroad, and 42 miles by the Great Northern. It is the judicial seat of Snohomish county and is the commercial center of a large district rich in natural resources. This section contains prominent features of interest both to the tourist and to the man looking for a home in the West, and it is one of the most fertile of the valleys watered by the many streams flowing down from the Cascade Mountains and emptying their waters into the main body of Puget Sound.



OIL WELL, SNOHOMISH COUNTY.

The Snohomish river is formed by the junction of two turbulent streams, the Skykomish and the Snoqualmie, which, flowing down from the Cascades through narrow gorges and contracted valleys, finally merge into a single stream at a point 18 miles distant from the mouth of the Snohomish. The latter river is a navigable stream, lines of boats plying regularly between the city of Snohomish, Everett and other points on the river, and Seattle, Tacoma and other centers of population of the Sound. Snohomish is situated on the river, about 11 miles above its mouth, and it is a point easily reached from Seattle and Tacoma by either boat or cars.

The settlement of Snohomish antedates the establishment of most of the other cities of the Sound country. The first house was erected on the site of the present city in 1859 by E. C. Ferguson, the present mayor of Snohomish. Mr. Ferguson filed a homestead claim on the site on which the city was subsequently built. Shortly after settling here he opened a store and by some little effort he induced a few people to settle near him, thus early forming the nucleus of the present flourishing city. The growth of Snohomish is largely due to the energy and perseverance of Mr. Ferguson himself, who, during the entire history of the city, has been prominently identified with its enterprises and public improvements, and who is today the most prominent citizen of the place whose welfare he has so materially advanced.

HON. E. C. FERGUSON, SNOHOMISH.

Mr. Ferguson was a leading spirit in the coterie of adventurous men who settled in Washington in the early 50's. The names of these men are linked and interwoven with the history and development of the western part of Washington. In 1860 and prior to that year, Mr. Ferguson was interested in building trails through the dense and impenetrable forests that separated the settlements of the Puget Sound country. He was the first man to take a train of pack horses over the Cascade Mountains. The route followed by Mr. Ferguson at that time was by way of Cady Pass, thence down the Wenatchee river to the Columbia and up the latter stream to Lake Chelan. Mr. Ferguson has repeatedly represented Snohomish county in the legislature, and has always been recognized as its leading citizen. Every movement tending to promote the interests of Snohomish city and county has received material support from his hands.

Mr. Ferguson is now president of the Snohomish Land Company, and he also holds the same office in the Snohomish National Bank.

During the past three years Snohomish has made most substantial improvement. The population of the place today is about 3,500 and the trade which the city enjoys is on a most substantial basis. The business streets are compactly built up with a good class of buildings and the costly and beautiful private residences of the city attest the degree of prosperity which has attended the efforts of the citizens who occupy them. The county court house, high school and other public buildings located at Snohomish are elegant and substantial structures that would be a credit to any of the larger cities of the Sound country. The city passesses a fine water-works and electric light plant, gas works, telephone service, a well equipped fire department, one daily and two weekly newspapers, two banks, each capitalized for $50,000, commodious hotels and a good opera house. During the past four or five years the annual expenditures for buildi~ improvements at Snohomish have averaged a quarter of a million dollars. In addition to this, large sums of local capital have been spent during this time in building and equipping saw and shingle mills and other manufacturing industries located in the vicinity of the city, enterprises that now add greatly to the material wealth of Snohomish.

RESIDENCE, HON. E. C FERGUSON, SNOHOMISH.

The tracks of three important lines of railroad pass through Snohomish. These roads are, the main line of the Great Northern, the Seattle, Lake Shore & Eastern,

PHOTO BY FRANK PERRY.

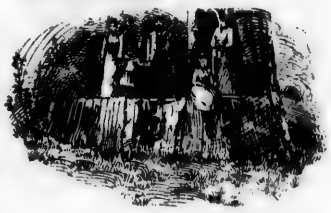
GIANT CEDAR NEAR SNOHOMISH. 18 FEET IN DIAMETER.

now operated by the Northern Pacific and the recently completed system of the Everett & Monte Cristo. The country surrounding and tributary to Snohomish is rich in the fertility of its soil, in the extent of the forest growth of valuable timber and in deposits of coal and minerals. At the headwaters of the numerous creeks which feed the Skykomish and Stillaguamish rivers valuable mineral discoveries have been made which it is thought will ultimately lead to considerable mining development.

An English and American syndicate is now spending several million dollars in development work in the famous Monte Cristo region located at the headwaters of the Sauk river in Snohomish county. Mining operations are also being carried on extensively in the Silver Creek district, which is drained by the Skykomish river. The entire mineral district which can be made tributary to Snohomish is now attracting considerable attention from practical mining men and the development of this rich section will do much to advance the interests of Snohomish. The Everett & Monte Cristo railroad, which now passes through the city and which has just been completed, opens up the entire mineral belt referred to above and the completion of this road has greatly facilitated the development of this district, which has heretofore been practically isolated owing to lack of opportunities afforded for getting the product of the mines to market.

Six of the 48 shingle mills in the county are located at Snohomish and these mills are doing a good business. The constantly increasing demand for red cedar shingles in the East makes the industry of sawing shingles here of considerable importance at the present time, and the business is a profitable one. Two large sawmills are operated in the vicinity of Snohomish as are a number of other industrial plants. The farmers occupying the rich valley in the vicinity of Snohomish are prosperous and some very fine farms are seen in this section. The staple products of the valley are hops and fruit, although large quantities of hay are also raised here which owing to the proximity to a market, always commands a good price. The section of country near Snohomish is one of the most picturesque and attractive to tourists in Western Washington. A leading feature of interest in this section are the famous falls of the Snoqualmie river, which drop some 268 feet over a sheer precipice. The country presents all the contrast of hill and valley with their variegated coloring and sharp contrasts, and it is a part of the Sound country that is worth visiting by all tourists who come West to see a country that is some day to startle the world with a rapid and substantial growth consequent on the development of the varied material sources of wealth which have so long laid dormant here.

PHOTO. BY FRANK PERRY.



CEDAR STUMP NEAR SNOHOMISH, 19 FEET IN DIAMETER

Mt. Vernon, Washington.—Mt. Vernon, a rapidly growing town of 1,300 inhabitants, is surrounded by the rich agricultural and timber section of Skagit county, of which it is the seat of justice. It is built upon both banks of the Skagit

river, and is joined by a costly wagon bridge, and is an important station on the Sound branch of the Great Northern railroad. It is 79 miles north of Seattle by rail. The Skagit river, on which the town is located, is the largest stream in Washington north of the Columbia river. The Skagit finds its source in the heart of the Cascade Mountains, and flowing through the center of Skagit county, empties into that part of Puget Sound known as Saratoga Passage. The river is navigable for large boats for 75 miles from its mouth, and for a distance of 15 miles inland it is affected by the tides.

SCHOOL HOUSE, MT. VERNON.

Skagit county, of which Mt. Vernon is the principal trading point, covers an area of about 2,400 square miles, or 1,250,000 acres. It contains 55 townships, of which only 18 are surveyed. It is estimated that the 1,650 square miles of forests in the county contain nearly 20,000,000,000 feet of timber. About one-half of this forest belt occupies bottom land, which is capable of a high state of cultivation when cleared. In the county are about 200 square miles of low and high lands adapted to the highest state of cultivation, as well as rich marsh lands. A great part of the latter has been reclaimed by means of ditches and dikes. This land yields enormous crops, the average yield of oats here being 100 bushels to the acre. Hops yield an average of one and two-thirds tons, hay three tons, potatoes, 296 bushels, onions, 500 bushels, mangel-wurzel beets, 1200 bushels, carrots, 1200 bushels and cabbage 18½ tons to the acre.

In the mountainous parts of the county are extensive and valuable deposits of coal and iron. The development of these latter resources is described at length in the coal-mining and mineral articles in another part of "The Handbook."

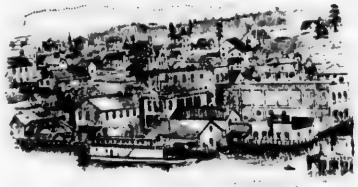
The town of Mt. Vernon was founded in 1890, and keeping pace with the rapid development of the surrounding country, has within the past three years grown to be the principal trading and manufacturing point in the county. The principal industries engaged in here at the present time are the manufacture of lumber and shingles. In the vicin ty of the town extensive logging operations are carried on. Three shingle mills, in addition to a large sawmill with a daily capacity of 50,000 feet, are located at Mt. Vernon. These mills have a daily capacity of 250,000 sningles. The town itself presents an attractive appearance. Its streets are broad and well kept. It has an eight-room brick school building, several churches and many costly residences. The streets are lighted by an electric light plant, which was erected at a cost of $19,000. This plant is equipped with one 45-arc machine and two incandescent machines with a capacity of 350 lights each.

The First National Bank of Mt. Vernon, organized March 5, 1891, is now one of the soundest financial institutions in Washington. It is closely connected with the banking houses of Dexter Horton & Co., of Seattle, and Ladd & Tilton, of Portland. Mr. Wm. M. Ladd, of the latter bank, is one of the stockholders of the First National at Mt. Vernon. Since its organization, this bank has remained under the same management. The capital stock of the bank is $50,000, the surplus and undivided profits on March 1, 1893 were $12,434, and the individual deposits subject to check at the same time were $124,615. The officers are as

FIRST NATIONAL BANK CORNER, MT. VERNON

follows: Geo. D. McLean, president; F. R. Van Tuye, vice-president: C. S. Moody, cashier. The directors are G. D. McLean, P. Halloran, F. R. Van Tuye and C. S. Moody.

La Conner, Washington.—La Conner, the trading and shipping point for the most fertile agricultural district in Western Washington, is located 70 miles distant from Seattle, by water, on that part of the shore of Puget Sound known as Saratoga Passage, which also sometimes goes under the name of Skagit Bay. A daily steamboat service connects La Conner with Seattle and other Sound points, and stages run daily between La Conner and Whitney, a station on the line of the Seattle & Northern railroad, four miles distant, as well as to Mt. Vernon, the county seat, where rail connection is made with the Sound branch of the Great Northern. The distance between La Conner and Mt. Vernon, by stage, is 10 miles.



VIEW OF LA CONNER

La Conner was founded in 1869, and was incorporated as a city in 1883. It now claims a population of 800, and is a thriving and prosperous town enjoying, as it does, a large and steady trade with the adjacent rich farming country. Near La Conner the Skagit river divides into a number of arms, or estuaries, forming the largest delta of any river of the Puget Sound basin. This delta is diked with mud walls two or three feet in height, and this section forming the cream of an agricultural belt of the lands bordering on Puget Sound, is thickly settled by prosperous farmers, whose chief products are oats, hay and cattle. The 75,000 acres comprising the Skagit delta and bordering on the Swinanish Indian reservation flats, are directly tributary to La Conner. The productions of this wonderful belt of agricultural land are said to represent in volume the products of 200,000 acres of the best land anywhere else in the state. As an instance of the wonderful fertility of this land, it can be stated that oats yield here over 125 bushels to the acre. Nearly the entire products of the farms here find an outlet at La Conner, and this point, outside of the large commercial centers, is one of the most important shipping ports of the Sound. The average annual yield of the country tributary to La Conner is about 1,500,000 bushels of oats, 12,000 tons of hay, and over 500,000 pounds of hops. La Conner is founded on a basis of the solid prosperity of the country adjacent, and its prospects for continued prosperity are absolutely assured. The government has made a $25,000 appropriation for the commencement of preliminary work in deepening and enlarging the channel which separates Fidalgo island from the mainland. When this channel is made navigable it will greatly shorten the distance between Bellingham Bay and Tacoma and Seattle, and boats on this route, after the completion of the channel, will all stop at La Conner, as the latter point will lie on the direct course between Bellingham Bay and Seattle.

HIGH SCHOOL, LA CONNER.

La Conner has a number of substantial brick and wooden business blocks, a fine electric light plant, a weekly newspaper, a bank, and a sawmill with a daily

capacity of 20,000 feet of lumber. The town also contains a handsome eight-room school house, a town hall, several churches, and just beyond the town limits are large and well laid-out fair grounds, which contain a fast one-half mile course.

The district in the vicinity of La Conner furnishes one of the best locations in the Northwest for a seed farm, and the one owned and operated by A. G. Tillinghast, at La Conner, is now widely known throughout the entire Pacific Northwest for the superior quality of the seeds it produces. The seeds grown on this farm are of a much higher vitality and make more vigorous plants than the Eastern-grown seeds. Mr. Tillinghast commenced business in 1885, and since that date has built up a large wholesale and retail seed trade. He ships tons of seeds to the East, and transacts a retail business by the means of catalogues, which he mails on application to any address.

Sedro, Washington.—Sedro, an important lumbering town in Skagit county, is situated 68 miles north of Seattle, and 22 miles east of Anacortes. It is on the Skagit river, one of the largest navigable streams in Washington. The town is the junction of the Seattle, Lake Shore & Eastern, Seattle & Northern, and Fairhaven & Southern railroads. The last-named road connects with the coal mines at Jennings, and the Seattle & Northern is operated between Anacortes and Hamilton, a distance of 35 miles.

Sedro now claims a population of 600. It contains a large hotel, a four-room school house, two churches, a bank, and a saw and shingle mill with a daily capacity of 20,000 feet of lumber and 100,000 shingles. The town presents an attractive appearance with its wide streets, which are thoroughly lighted after nightfall by electricity. The sidewalks are wide, and the townsite is laid out on a liberal plan. But a few miles distant from Sedro are the foothills of the Cascade Mountains, and in the vicinity of the town are found excellent hunting and fishing.

Anacortes, Washington.—Lying directly opposite the Straits of Fuca and separated from Bellingham Bay by a short stretch of land-locked water, is Fidalgo Island, which at low tide is a peninsula surrounded on three sides by excellent harbors. Situated on the north shore of this island is Anacortes, a rising young trading point, and the site of considerable manufacturing enterprises. The town was founded in January, 1890. Anacortes owes its existence as a town to men of great wealth and influence. Its rapid growth was due primarily to the wild wave of speculation which swept over certain parts of the Northwest in 1890. The town has now emerged from the boom stage of its existence into a state of dependence for its support on the legitimate trade of a rich tributary section. The wild hopes of the early promoters of the townsite here have been far from realized. Anacortes is not today of the importance that its promoters hoped it would be. Some of its projected enterprises have lagged, its business is slow and its natural growth has been somewhat retarded by the causes which are the outgrowth of any "busted boom." Anacortes, however, occupies exceptional natural advantages of location. Its harbor is easily accessible at all times by the deepest vessels. This harbor is free from storms, and the country back of Anacortes is one of matchless resources. These advantages backed by capital will insure the town a prosperous existence, and Anacortes today can not be regarded as one of the dead boom towns of the West.

Anacortes is now the terminus of the Seattle & Northern railroad, which runs east for a distance of 40 miles to Hamilton. At the latter point are located the large coal mines owned by the Oregon Improvement Company. At Burlington this road

connects with the Puget Sound branch of the Great Northern railway, and at Wooley it forms a junction with the Seattle, Lake Shore & Eastern railroad, with its Pacific coast terminus at Seattle. In addition to excellent railroad connections, Anacortes has the advantage of numerous steamer lines which pass this point daily. These lines connect Anacortes with Tacoma, Seattle, Port Townsend; Victoria and Vancouver, British Columbia; New Whatcom and Fairhaven, on Bellingham Bay, and all Sound points.

Anacortes claims a population of 1,200. It is compactly built, the principal business structures being of brick. Among the substantial buildings of the town are a $34,000 school house, a palatial hotel, an opera house and three handsome church edifices. The people here have the advantages of a fine water-works system, a well-equipped electric light plant, a volunteer fire department and a line of electric street railway. Among the industrial plants of Anacortes are three sawmills, two sash and door factories, a brick yard and a fish-packing establishment. As a summer resort, Anacortes is not excelled by any point on Puget Sound. Here there is a happy blending of marine and landscape scenery which, combined with romantic nooks in the vicinity and the mild and salubrious climate, makes the town an ideal spot in which to pass a summer's vacation.

Bellingham Bay and the North Puget Sound Country.—A glance at any map of the state of Washington will show that Bellingham Bay is the most northerly, land-locked harbor on the Pacific coast boundary of the United States. This large inlet is formed by a peninsula extending out into the waters of Puget Sound on the north, and by Lummi Island on the south. Between this peninsula and Lummi Island is a deep channel, marked on the maps as Hale's Passage, which affords a wide and perfectly safe entrance to the bay inside. Bellingham Bay is an ideal harbor of refuge. This large inlet is practically entirely land-locked, the high hills surrounding it on all sides serving as a perfect protection against all high winds. The surface of the bay itself is always as smooth as are the waters of any large inland lake. The shores of the bay for a distance of five miles are suitable for dockage purposes, and there is a sufficient depth of water along this entire stretch of shore line to float the largest vessels. The hackneyed expression of a harbor's "capacity to float the navies of the world" is not lacking in significance when used in connection with Bellingham Bay, and it is conceded by all old Puget Sound navigators that this is one of the best harbors of the coast.

PHOTO. BY B. B. DOBBS, NEW WHATCOM.

MT. BAKER

All the surroundings of Bellingham Bay are attractive. The land washed by the waters of the bay is indented in the shape of a semi-circle, or perhaps better described as a horseshoe. This land maintains a general level for some distance back from the shore line. Back of this level stretch there is a general rise in the surface of the land for a distance of perhaps one mile, at which point an elevation of about 200 feet is attained. Beyond the summit of this elevation, the land slopes gradually downwards as far away as the foothills of the Cascade Mountains. The evergreen forests of fir, cedar and hemlock, with the perennial snows of the lofty Cascade Mountains to the west in sharp contrast with the placid waters of Bellingham Bay in the foreground, form a picture that claims the attention of even the tourist who is surfeited with scenery and scenic effects of landscape.

MT. BAKER, FROM NORTH FORK, NOOKSACK RIVER.

Before the era of railroad development in the West, three unimportant villages were located on the shores of Bellingham Bay. These were Whatcom, at one time a trading post of the Hudson's Bay Company, Sehome and Bellingham. In the early history of this section, the great advantages of the harbor were but illy appreciated, the latent resources of the country back of the harbor were unknown, and the population of these hamlets was too small to allow these points to detract in the least from the importance of the better settled portion of the Puget Sound country. In 1889, the Tacoma capitalist, Nelson Bennett, becoming fully convinced of the advantages of the shores of Bellingham Bay for future great development, formed with others, the Fairhaven Land Company. This company at once formulated a liberal plan of development work, they cleared away the forests skirting the shores of the bay and located the present city of Fairhaven. As the population of the section increased, a consolidation between the old towns of Whatcom and Sehome was effected, under the corporate name of New Whatcom, and today this latter city and Fairhaven, with a combined population of 15,000 covers the entire semi-circle, forming the shore line of the bay.

TURAL BRIDGE, BAKER RIVER, NEAR MT. BAKER.

Both Skagit and Whatcom counties find the natural outlet for their products at Bellingham Bay. Both of these counties contain most valuable deposits of coal, iron, the base and precious metals and stone. The stone taken out of the quarries of this section is conceded to rank as high for building purposes, as any stone quarried in the United States, and large quantities of this stone are now shipped to all parts of the coast. Added to this hidden wealth are vast forests of the finest merchantable timber and rich deposits of alluvial soil, adapted to the highest state of cultivation. The timber belt lying within a radius of 30 miles of the harbor, and easily reached by both rail and water, contains unnumbered millions of feet of fir

and cedar, as well as other valuable woods, which are yet practically untouched, although the logging interests of this section are second in importance to those of no other part of the Puget Sound country. Giant trees are found in these forests, and even the large timber is sound to the core. One mighty giant of the forest towers for several hundred feet above the waters of Lake Whatcom, that is strikingly typical of the big trees of this section. This tree is 44 feet in circumference at the base, and its rise heavenward is truly majestic. A single log 20 feet in length, taken out of the forests back of Bellingham Bay, scaled 11,125 feet of lumber. On a single stump in this same forest, 172 persons were photographed not long since. These tales almost rival the stories of the giant red woods of California, but they are statements easily susceptible of verification, and they are not doubted by those who have had the pleasure of an inspection of the virgin forests of Western Washington.

PHOTO. BY FRENCH.

BAKER RIVER, NEAR MT. BAKER.

In its coal deposits alone, the district tributary to Bellingham Bay contains resources that in time will rival those of even Pennsylvania itself. In Whatcom and Skagit counties are found the largest and most valuable deposits of coal on the Pacific Coast. The presence of bituminous coal in the state was made known to the world by the opening of the old Sehome mine located on Bellingham Bay. This mine has long since been abandoned, as better and more extensive deposits of the black diamond have been uncovered in this section. Two of the great developed coal mines of the Bellingham Bay country are the Fairhaven mine, owned by Fairhaven capitalists, and the Blue Canyon mine, on the eastern shore of Lake Whatcom, eight miles distant from tide water. This latter mine is nearer the shores of navigable salt water than are any of the other mines of the Puget Sound basin. The Fairhaven mine is located 20 miles southeast of Fairhaven. This mine contains several veins, varying in width from 7 to 30 feet. These veins lay across a high elevation, and as the tunnels run along the "strike," the coal is run out of the mines by gravity alone at a very light expense. Careful experimenting has demonstrated the coking qualities of this coal to be of the very highest standard, as shown by the following table of comparison between this coal and the product of the celebrated Connelsville product. Connelsville coal, carbon, 59.6; Fairhaven coal, carbon, 60.70: Connelsville coal, volatile matter, 30.0; Fairhaven coal, volatile matter, 29.00; Connelsville coal, ash, 8.3; Fairhaven coal, ash, 9.10; Connelsville coal, sulphur, 0.8; Fairhaven coal, sulphur, 0.6; Connelsville coal, moisture, 1.3; Fairhaven coal, moisture, 0.35; Connelsville coke, carbon, 87.6; Fairhaven coke, carbon, 87.8; Connelsville coke, volatile matter, 0.5; Fairhaven coke, volatile matter, 0.0; Connelsville coke, ash, 11.0; Fairhaven coke, ash, 11.2; Connelsville coke, sulphur, 0.8; Fairhaven coke, sulphur, 0.6; Connelsville coke, moisture, 0.1; Fairhaven coke, moisture, 0.3.

The superintendent of the Tacoma Coal Company, an unprejudiced and unbiased authority on this subject, makes the following statement, in a written report which he made to the stockholders of the Fairhaven mine: "I would say this in regard to your coal: I have been making coke for 20 years from almost all the coal

in the United States. I have never found any coal superior to yours for coking, if properly handled." The Great Northern Railroad Company is part owner in the Fairhaven mine, and now uses this coal in its locomotives. The shipment of the coal is made over the Skagit Valley branch of the Great Northern.

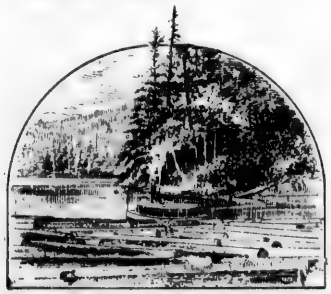
The Blue Canyon coal mine is also a very valuable property, both owing to the quality of its product and to the accessibility of the mine to deep water. The output of this mine is shipped to large coal-bunkers located on the water front adjoining Fairhaven. Part of this coal is shipped over the railroad owned by the coal company, and the rest over the line of the Fairhaven & New Whatcom electric railway connecting Bellingham Bay with Lake Whatcom. The Blue Canyon coal is unusually free from phosphorus and sulphur, it is good for steaming purposes, and also for making gas. Following is the average of several analyses made of this coal: volatile matter, 32.19; fixed carbon, 60.81; ash, 6; moisture, 1.

In close proximity to these deposits of fine coking coal are extensive croppings of iron ore. If development work establishes the commercial value of this ore, as every indication now points that it will, Bellingham Bay will some day be the center of one of the greatest smelting districts in the United States. Fuel for reduction is obtained in inexhaustible quantities, at the lowest possible cost, the shipping facilities are more than ample for handling the product of the smelters, and the great demand now being made for iron and steel in all parts of the West will make a demand for this product here that will justify the establishment of smelting plants on the most extensive scale in this district.

Silver and gold ledges have been located by prospectors, both in Skagit and Whatcom counties. The future construction of railroad lines will make these deposits of great commercial value. Graphite, asbestos, sulphur and copper have also been unearthed in the Skagit valley within a distance of 30 miles of Bellingham Bay, but they have not been worked.

Just south of Fairhaven, on Chuckanut Bay, is located the great Chuckanut stone quarry. The stone mined in this quarry is a dark gray sandstone, of even grain and susceptible of great beauty of finish. It hardens rapidly after having been exposed to the air, and it makes a handsome and durable building material. A great demand exists at the present time for this stone throughout both Washington and British Columbia. Some of the finest buildings in the Bellingham Bay country have been constructed of this stone, as well as some of the finest structures of other cities of the state. The fine new court house located at Olympia, one of the handsomest pieces of architecture in the state, was built of this stone. At Roche Harbor, on San Juan Islands, 30 miles southwest of Fairhaven, are the largest lime works on the coast, and valuable deposits of lime rock have been discovered at points nearer to Bellingham Bay.

PHOTO. BY G. B. DOBBS.



LAKE WHATCOM, NEAR NEW WHATCOM.

Although the mineral and forest wealth of Whatcom and Skagit counties, will perhaps always prove the principal source of revenue in this favored part of the state, thousands of acres of fine agricultural land are found within the limits of

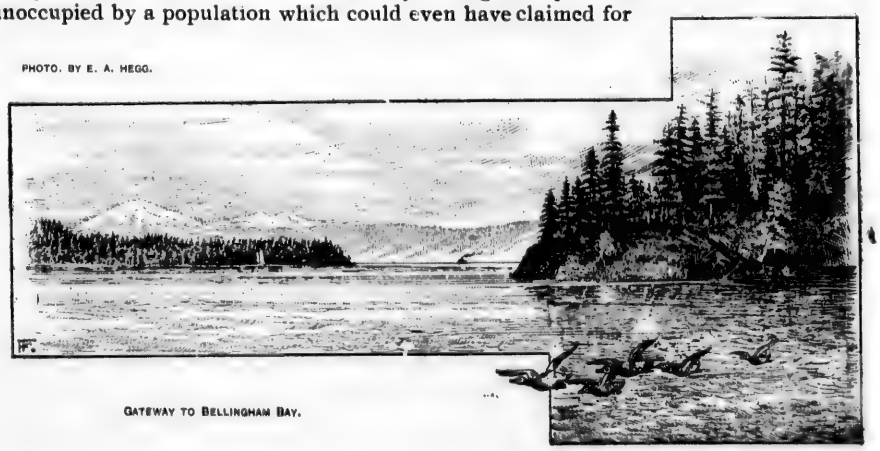
these counties. The statement is authoritively made that this section contains no less than 600,000 acres of farming land. Every acre of the small percentage of this arable portion which is now under cultivation is yielding handsome returns. A great part of the best farming land of these two counties is located in the Nooksack valley, which is now traversed by the lines of three great railway systems, the Great Northern, the Northern Pacific, and the Canadian Pacific. Oats furnish one of the most valuable crops of the farms of this section. The average yield of oats to the acre here runs from 60 to even as high as 125 bushels. Barley also does well on this land, yields of from 50 to 75 bushels to the acre being common crops. Hops are raised as well here as in the best favored sections of Puyallup valley. A common yield of hops in this district is about 2,000 pounds to the acre, and hop culture here has proved a highly remunerative calling. In raising potatoes the farmers of Whatcom county are easily awarded the palm. Crops of 700 bushels to the acre do not astonish the natives here, and a yield of less than 400 bushels to the acre is hardly deemed worth digging. The growth of the cities located on the shores of Bellingham Bay has made truck gardening on the adjacent farming lands a most profitabe industry, and with the increased demands for vegetables in the populated centers here the value of all of this highly fertile land is rapidly increasing.

PHOTO BY B. B. DOBBS.

LUMBER CAMP ON LAKE WHATCOM.

Fairhaven, Washington.—Fairhaven is a type of the young cities of the West which have attained prominence as commercial and populous centers as a direct result of advantages of location and the spirit of enterprise which dominates the growth of all modern cities. A few years ago the present site of Fairhaven was unoccupied by a population which could even have claimed for

PHOTO. BY E. A. HEGG.

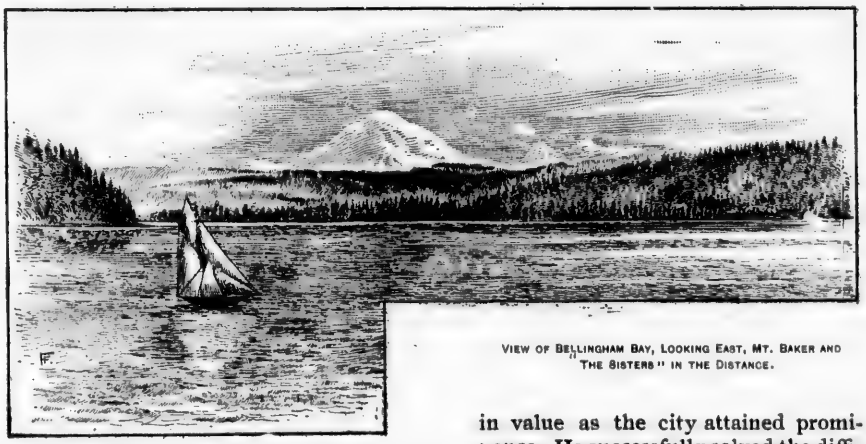


GATEWAY TO BELLINGHAM BAY.

the place the pretensions of a village. At the present writing Fairhaven is an important railroad and banking center; it boasts of the finest hotel in Western Washington outside of Tacoma and Seattle; its main business streets are lined with buildings that would be a credit to the principal thoroughfares of Portland, and the city is the home of some of the wealthiest and best known people of the state.

Fairhaven has a history, and like the history of the individual who has risen from obscurity to a position of wealth and importance, the historical sketch of the city's progress is not without interest. The life of Fairhaven dates from 1889, when Nelson Bennett, the Tacoma millionaire who cut the famous Stampede tunnel through the backbone of the Cascade range of mountains for the Northern Pacific, purchased the present site of the city. Mr. Bennett became a rich man owing to his thorough mastery of business propositions. He early foresaw the growth of Tacoma and profited by this foresight in numerous purchases of Tacoma realty which appreciated

PHOTO. BY E. A. HEGG.



VIEW OF BELLINGHAM BAY, LOOKING EAST, MT. BAKER AND "THE SISTERS" IN THE DISTANCE.

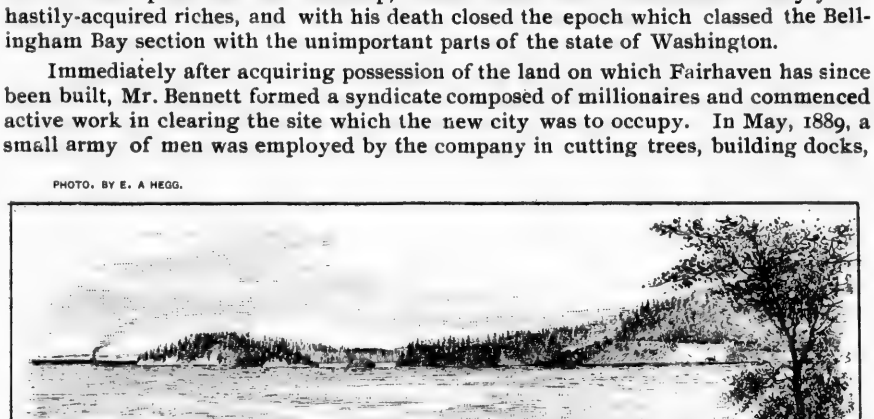
in value as the city attained prominence. He successfully solved the difficult problem of piercing the rugged chain of the Cascades in making a pathway for the iron horse from the sagebrush districts of Eastern Washington to a tide-water connection on Puget Sound, and with the same foresight which he evidenced in his other business investments, Mr. Bennett was the first man to realize fully the advantages of the shores of Bellingham Bay as a prospective site for the establishment of a city of large population and commercial importance and the development of Fairhaven during the past few years has realized fully the reliability of the forecast made by Mr. Bennett when he first carefully looked over the ground some four years since.

The present site of Fairhaven in 1889 was owned by an old settler named Dan Harris. Mr. Harris was a living example of the "wait and gain" policy of the men who have grown rich by real estate investments in the far West. He had neither the money nor the disposition to improve his real estate holdings, but he had the utmost confidence in what the future had in store for the land on which he had squatted. When Nelson Bennett first made the old man an offer of $50,000 for the piece of property on Bellingham Bay on which Harris had so long banked his hopes for future

riches, the old Bellingham settler positively refused to sell. When Bennett supplemented this princely offer with one of $100,000 for the same property, Harris coolly pocketed the check for this amount and retired to the life of ease which the fortune assured him. Like many others who have had sudden fortune forced upon them after a life of privation and hardship, Harris lived but a few months to enjoy his hastily-acquired riches, and with his death closed the epoch which classed the Bellingham Bay section with the unimportant parts of the state of Washington.

Immediately after acquiring possession of the land on which Fairhaven has since been built, Mr. Bennett formed a syndicate composed of millionaires and commenced active work in clearing the site which the new city was to occupy. In May, 1889, a small army of men was employed by the company in cutting trees, building docks,

PHOTO. BY E. A HEGG.



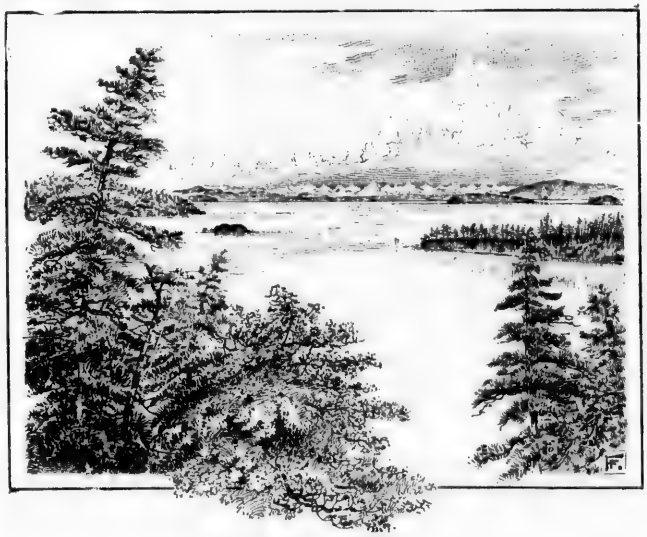
CHUCKANUT BAY, LOOKING NORTH, SHOWING CHUCKANUT SANDSTONE QUARRIES TO THE RIGHT.

opening the coal mines adjacent and in railroad grading. The line of the Fairhaven & Southern railroad was pushed out from Fairhaven toward the Skagit river, in which section some of the richest coal deposits of the state are located. Rolling stock was hastily secured for this line, arrangements were made for the establishment of the best steamboat connection between Fairhaven and all other Sound ports and this place soon became one of the most important transportation points of the Sound district. Fairhaven today has the best of railroad connection with all parts of the coast both north and south, it has the choice of several transcontinental lines for reaching the East and it is a large shipping point for vessels of deep-water draught.

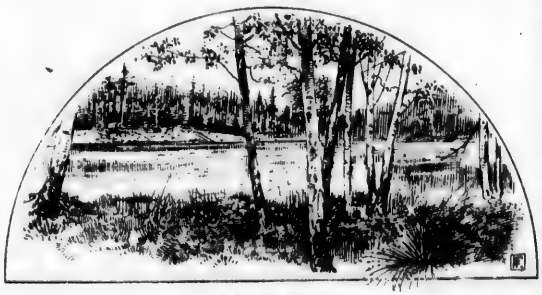
Fairhaven, located on Bellingham Bay, fully described in an article published in connection with this article, has a harbor of splendid proportions carrying a sufficient depth of water to float the largest vessels, easily accessible and perfectly sheltered. The site of the city itself is especially adapted for the upbuilding of a city. The grades of the main streets while easy are sufficient to afford perfect drainage. Add to this magnificent scenery, a wealth of country tributary sufficient to build here a city of the dimensions of Portland or San Francisco, and the advantages in favor of Fairhaven for future growth and rapid development are not surpassed by those of any other city located on the salt waters of Puget Sound.

The entire two miles of water-front at Fairhaven affords a sufficient depth of water to float ships of any tonnage, and it affords the best of locations for wharves, sawmills, foundries and other manufacturing plants. A large number of factories now line the water-front here and, as shown by the accompanying illustrations of Fairhaven's harbor, the city has excellent harbor facilities. Fairhaven has perfect railroad connections. It is located on the Fairhaven & Southern branch of the Great Northern railroad. Connection is formed between Fairhaven and Seattle on the south by the Seattle & Montana branch of the Great Northern system and with New Westminster, in British Columbia, on the north, where close connection is made with the Canadian Pacific by the New Westminster & Southern branch of the same great system. It is given out as the ultimate purpose of the management of the Great Northern to make Fairhaven its official terminus on Puget Sound. With this end in view, the company has already acquired title to a large lot of very valuable land in and around this city. The company owns some of the most valuable water frontage at Fairhaven and they are also largely interested in some of the best paying coal mines located near the city. The United States terminus of the Canadian Pacific on the Pacific coast is already officially established at New Whatcom, a city also located on Bellingham Bay and whose interests are closely allied with those of Fairhaven and whose corporate limits adjoin the present limits of Fairhaven. Connection is also made with the Northern Pacific's Seattle, Lake Shore & Eastern branch at Sedro via the

PHOTO. BY E. A. HEGG.



ISLAND SCENE NEAR FAIRHAVEN.



LAKE PADDEN, FAIRHAVEN.

LAKE SAMISH, FAIRHAVEN.

Fairhaven & Southern railroad. Fairhaven has direct connection with her sister city, New Whatcom by the Fairhaven & New Whatcom electric road. Cars run over this line between the two cities every 15 minutes during the day and until late at night, and this is today one of the best equipped and best operated lines of electric road on the coast.

Fairhaven now boasts of miles of well graded streets, good sidewalks are laid all over the city and every attention has been paid to other public improvements here. The city has a water supply that furnishes water of unequaled purity for domestic purposes and in inexhaustible quantities. The water is conducted into the city from Lake Padden through a 12-inch steel main and is distributed throughout Fairhaven by means of lateral mains respectively 10, 8, 6 and 4 inches in diameter. This lake is located two miles from Fairhaven, and as the elevation of its waters is 418 feet above the main business street of the city, sufficient pressure is afforded in the mains at Fairhaven to furnish an ample protection against fire. The city is well lighted by both gas and electricity. The Fairhaven Electric Light & Motor Company operates two engines of a combined horse power of 225. Two American arc dynamos run by these engines keep up 110 2,000-candle power arc lamps, and two No. 20 Edison incandescent dynamos, operated in connection with this same plant, have a capacity of 2,000 16-candle power incandescent lamps. The Bellingham Bay Gas Company supplies a fine quality of gas to both the cities of Fairhaven and New Whatcom at a reasonable price. Fairhaven has the best of public school facilities. It has several handsome and commodious school houses, and the schools here are presided over by competent instructors. The Hotel Fairhaven, erected at a cost of $150,000, is one of the handsomest and best conducted hotels on the coast. The building is 4½ stories high, surmounted by a cupola. It is constructed entirely of brick and stone, and it is one of the most striking pieces of architecture in the state. The gray sandstone used in the construction of this building was taken out of the Fairhaven quarries. The interior finish of the hotel is in antique and red oak and California redwood. The hotel contains magnificent suites of apartments, it is fitted with every modern appointment, and it is conducted in the same lavish style as is noted in The Palace, of San Francisco, The Portland, of Portland, or The Tacoma, at the "City of Destiny."

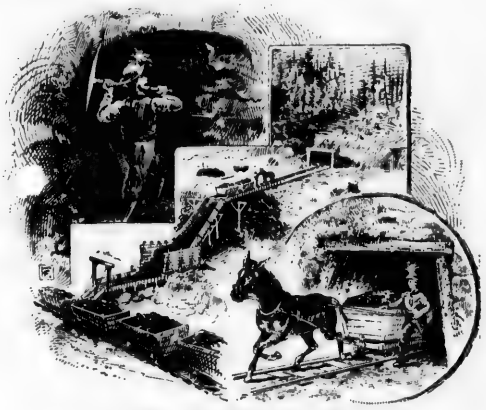
LARRABEE AVE. SCHOOL, FAIRHAVEN.

HOTEL FAIRHAVEN, FAIRHAVEN.

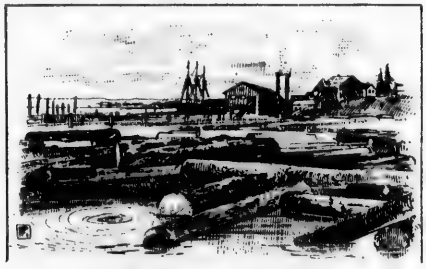
A number of very large manufacturing plants are located at Fairhaven. W. A.

Woodin's lumber mill here turned out 13,500,000 shingles during 1892, and during the same year the mill manufactured 13,500,000 feet of lumber. The output of the mill will be largely increased the present year. In the shipment of coal Fairhaven is one of the most important points on Puget Sound. The coal bunkers of the Blue Canyon Coal Company, immediately adjoining Fairhaven, handle immense quantities of the black diamond, and ships and steamers are constantly taking in coal at these bunkers. The Fairhaven Foundry & Machine Company's plant, erected at Fairhaven at a cost of $75,000, is an enterprise of considerable importance to the entire Bellingham Bay section. The plant consists of several buildings, foundry, machine shop and boiler room. The plant occupies a piece of ground 200 x 200 feet in size, and is fitted with all modern appliances.

WATER POWER, FAIRHAVEN LAND CO.'S MILL, FAIRHAVEN.



SKETCHES AT THE FAIRHAVEN COAL MINES.
(OPERATED BY THE FAIRHAVEN LAND CO.)



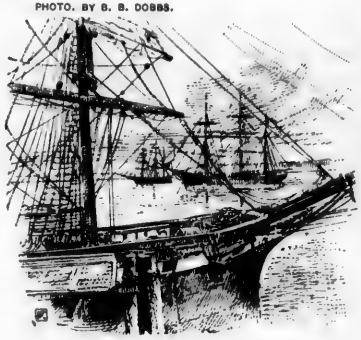
BELLINGHAM BAY MILL, FAIRHAVEN.

Fairhaven has a number of very strong banks. Four banks are located here, all on the best of financial footings. These are the Fairhaven National, The First National, The Citizens, and the Bank of Fairhaven. Fairhaven as a money and trading center, as a shipping point and a railroad center of prominence, has attained a position that more than assures the city's future. The Fairhaven Land Company here will furnish all desired information on Fairhaven.

New Whatcom, Washington.—New Whatcom is the principal city of Whatcom county. It is located on Bellingham Bay, and is a place of considerable importance as a trade center and shipping port. New Whatcom is the result of the combination of the two old towns of Sehome and Whatcom. With the development

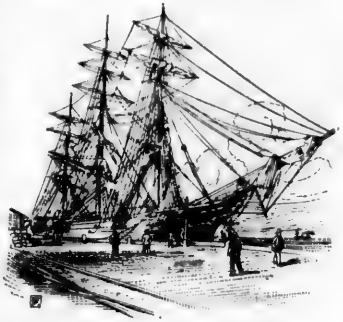
of the section bordering on Bellingham Bay the two old settlements of Whatcom and Sehome practically grew together, and when the time was reached where the limits of one town touched the limits of the other, the question of annexation was broached, and annexation of population and business interests was the result under the corporate name of New Whatcom. The combined population of the old towns of Whatcom and Sehome, as shown by the official census of 1890 was 7,000. The population of New Whatcom has largely increased since that time, and this city today in population and commercial standing ranks third among the cities located on the shores of Puget Sound.

PHOTO. BY B. B. DOBBS.



NEW WHATCOM HARBOR—FROM CORNWALL MILL.

PHOTO. BY B. B. DOBBS.



SHIP AT DOCK, NEW WHATCOM.

Whatcom county, of which New Whatcom is the seat of justice, is the largest county of the state located west of the Cascade Mountains. It has all the diversified resources of a fertile soil, thousands of acres of forest containing the best timber, rich veins of coal, varying from 3 to 12 feet in width, fine quarries of the best building stone, and the waters which wash the western shores of the county teem with the best of the salt-water food fishes. Bellingham Bay, on which New Whatcom is located, has an area of 50 square miles, and the water at the city's docks is deep enough to float any large sea-going vessel. New Whatcom is a shipping port of great importance, and it is also a railroad center of prominence. It is the official United States terminus of the Canadian Pacific railroad, the trains of which reach the city over the line of the Bellingham Bay & British Columbia branch of the

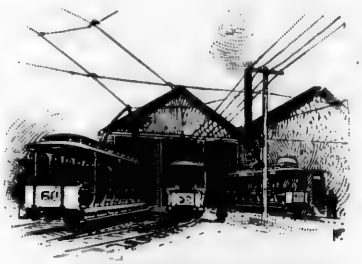
PHOTO. BY B. B. DOBBS.

RESIDENCE, HUGH ELDRIDGE, NEW WHATCOM.

PHOTO. BY B. B. DOBBS.

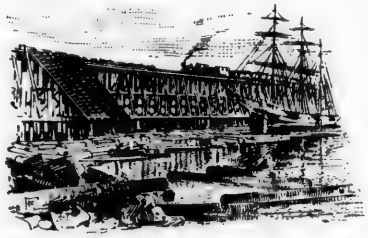
SCENE, FAIRHAVEN & NEW WHATCOM ELECTRIC RAILWAY.

Canadian Pacific system. This road connects New Whatcom with Vancouver, British Columbia, direct. New Whatcom is also on the line of the Fairhaven & Southern railroad, which connects with the Seattle & Montana railroad line on the south, and with the Westminster & Southern railroad on the north. The three last mentioned roads all form a part of the Great Northern system, which now runs through trains between St. Paul on the east, and New Whatcom, Fairhaven and other Sound cities on the west. In addition to rail connection with all parts of the United States, New Whatcom has also the advantage of communication with all Sound ports by a number of lines of passenger steamers. Rapid-transit facilities are afforded between New Whatcom and Fairhaven by the Fairhaven & New Whatcom Electric Railway line. This same line also affords connection with Lake Whatcom and with the outlying suburbs. Frequent trips are made over this road between New Whatcom and Fairhaven during the day, as well as until late at night. The president of the line is Mr. Hugh Eldridge, one of the most successful young business men of Western Washington. The construction and equipment of the road call for the favorable indorsement of all those who have had the benefit of a ride in its cars. The service it renders its patrons in easy and rapid transit, is so perfect that complaints of the inefficiency of the line have never been made to the management, a distinction in favor of the company operating the road that is in sharp contrast to the abuse usually heaped upon companies operating rapid-transit lines. The company operating this line now owns 15 miles of road, and it is its intention to increase this mileage as the growth of the city and suburbs requires extensions of the present complete system. Three lines of road are now operated under this system. One of these connects Fairhaven and New Whatcom, another line runs from the heart of the city of New Whatcom out to the court house, and the third line connects New Whatcom and Lake Whatcom. Over the road running between the city and the lake, in addition to the passenger traffic, a large freight business is done in hauling the product of the Blue Canyon coal mine to the bunkers located on Bellingham Bay.



POWER AND CAR HOUSE, FAIRHAVEN & NEW WHATCOM ELECTRIC RAILWAY, NEW WHATCOM.

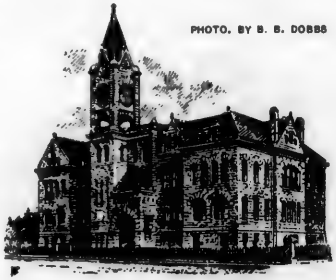
PHOTO. BY B. B. DOBBS.



BLUE CANYON COAL BUNKERS, NEW WHATCOM.

Among the many fine public buildings at New Whatcom, the court house erected at a cost of $100,000, the city hall and the handsome brick school houses, the latter of which cost from $15,000 upwards, are worthy of special mention. These

PHOTO. BY B. B. DOBBS



COUNTY COURT HOUSE, NEW WHATCOM.

PHOTO. BY B. B. DOBBS.

CITY HALL, NEW WHATCOM.

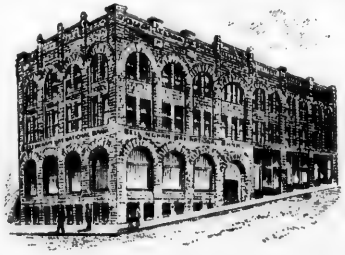
buildings, as well as many of the finest business blocks of the city, are built either entirely or in part with trimmings of the famous blue sandstone of the Chuckanut quarries, located on Chuckanut Bay, just south of Fairhaven. This stone is shipped largely to British Columbia, and has found its way even as far south as Portland. The stone trimmings and arches of the new Presbyterian church of Portland, one of the finest church edifices of the coast, are from the Chuckanut quarries, as is also the stone used in the construction of Portland's postoffice.

New Whatcom has the purest of water supply. Water for use in the city is taken from Lake Whatcom, a beautiful sheet of water located three miles east of the city. This lake is fed by mountain springs and by the melting glaciers of the eastern part of the county. The lake is 13 miles in length, and from one-half to two miles wide, and varies in depth from 200 to 500 feet, thus assuring an inexhaustible supply of the purest water for all time at New Whatcom. The elevation of the lake is 318 feet above tidewater level. The hydrants in New Whatcom carry constantly a pressure of 90 pounds to the square inch, a sufficient pressure to throw a stream of water 175 feet through a one-inch nozzle. The pressure in the city's mains alone furnishes a most ample protection against fire. Lake Whatcom is one of the most charming resorts near Puget Sound. It is easily reached from New Whatcom by the electric road. The waters of the lake abound with lake trout of the black spotted variety, fish that weigh all the way from one to six pounds each. They are gamy and highly palatable. A good hotel is now conducted on the shores of Lake Whatcom for the accommodation of tourists, and the lake is becoming more popular as a summer resort each successive year.

PHOTO. BY B. B. DOBBS.

LINCOLN SCHOOL, NEW WHATCOM.

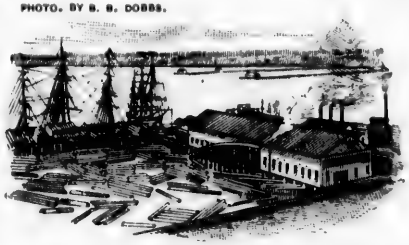
In the matter of street improvements New Whatcom is fully abreast of the times. The city now contains many miles of well-planked sidewalks and streets, and this work of street improvement has never been allowed to lag here, even during the dullest periods of the city's history. Two engines of 250 horse-power capacity each, furnish the power for running the dynamos of the city's electric light plant. This plant has a capacity of 300 arc lights and 1,000 incandescent lights. The city has also the advantage of a good quality of gas for illuminating purposes supplied by a local company. New Whatcom is the seat of considerable manufacturing activity. The largest mill



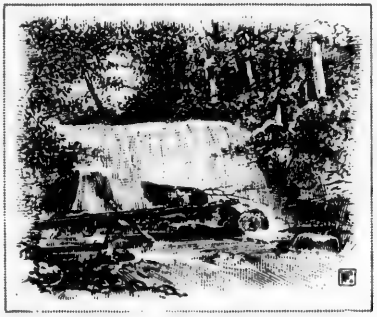
BELLINGHAM BAY NATIONAL BANK BUILDING, NEW WHATCOM.

in the city is the Cornwall mill, owned by the Bellingham Bay Improvement Company. This is conveniently located on the water front, and is connected by switches with the Great Northern and Bellingham Bay & British Columbia railroads. The mill company enjoys the best of transportation facilities both by rail and by water. This mill is fitted with the latest and best improved machinery and is under the management of the veteran lumberman, Mr. George E. Atkinson, a gentleman who stands deservedly high in all parts of the coast. The output of the Cornwall mill for 1892 was 41,600,000 feet of lumber. This was the fourth largest output of any mill in Washington during that year. The three mills showing a larger output than the Cornwall mill during that time were those owned by the Port Blakely Mill Company, 70,647,000 feet; the Tacoma Mill Company, 62,931,214 feet; and the St. Paul & Tacoma Lumber Company, 47,706,726 feet. In addition to the Cornwall mill, three other large milling plants are located at New Whatcom. These are the mills of the Fairhaven Land Company, Miller & Bridenstine, Meridian Mill Company and W. E. McDonald. The total output of the New Whatcom lumber mills for 1892 was 57,010,000 feet. The aggregate output of the eight shingle mills located here during the same year was 72,660,000 shingles.

PHOTO. BY B. B. DOBBS.



CORNWALL MILL, NEW WHATCOM.



WHATCOM CREEK FALLS, NEW WHATCOM.

During the spring of 1893 propositions from experienced men to locate woolen mills at New Whatcom received the favorable consideration of the people here. A bonus of $15,000 was quickly raised to secure the establishment of this extensive plant, and the citizens of New Whatcom now entertain the ambition that the output of woolen goods will soon be second in importance in the line of manufactures here to those of the present great output of lumber at this point.

The business streets of New Whatcom occupy level ground adjacent to the bay in front. The residence portion of the city is on gently sloping ground, affording perfect views of the bay and surrounding country. From the windows of the many fine private residences crowning these slopes the eye can wander across the broad expanse of the waters of Bellingham Bay as far away as the snow-capped peaks of the Olympic range of mountains to the west, while to the east can be seen the towering expanse of Mt. Baker, one of the most striking peaks in scenic effects of the entire Cascade range.

PHOTO. BY B. B. DOBBS.

ROTH BLOCK, NEW WHATCOM.

PHOTO. BY B. B. DOBBS.

VICTOR BLOCK, NEW WHATCOM.

New Whatcom has a good hotel, and with the many attractions of the city, this is rapidly becoming one of the most frequented points by tourists in the Northwest. The Bellingham, the leading hotel here is conducted by its owner, Mr. John H. Stenger, an experienced hotel man. The tables of the Bellingham are always loaded with the choicest of game and fish, and the house is deservedly popular with the traveling public.

Foremost in the ranks of those whose energy and whose unwavering confidence in New Whatcom's future have done much to advance the city's interests, is Frank N. Barney. This gentleman's foresight has enabled him not only to make profitable investments for himself at this point, but also as a reliable investment and real estate agent he has been able to invest his customers' money where it has brought large individual returns to the investors. Mr. Barney enjoys the entire respect of all those who have ever had business dealings with him. He is familiar with real estate values in the entire Bellingham Bay section. He is quick to anticipate an appreciation of values in city or suburban property, and he is always glad to furnish any information by mail, or in person, to those who are desirous of investigating the advantages of property here with a view of either a permanent residence or for investment only.

PHOTO. BY B. B. DOBBS.

HOTEL BELLINGHAM, NEW WHATCOM.

Blaine, Washington.—Blaine, named after the illustrious American statesman, is located in the extreme northwestern part of the state of Washington, on the boundary line between the United States and British Columbia. The inlet from Puget Sound, on which Blaine is located, although really a part of Semiahmoo Bay, is known as Drayton Harbor. This is a large and land-locked body of water, capable of affording anchorage to a large fleet of vessels. Blaine is directly opposite the Straits of Fuca. The line from the entrance to the straits from the ocean to Blaine's wharves is practically a perfectly straight one, and so free from obstructions to navigation is the entrance to Semiahmoo Bay, that vessels frequently sail from the ocean direct to the wharves of Blaine without the aid of a tug.

PUBLIC SCHOOL, BLAINE.

Blaine has been made a port of entry. From its location it is the last point in the United States that vessels sailing north into the waters along the shores of British Columbia can touch at, and this has made Blaine quite an important seaport town for the large number of vessels engaged in the Alaska trade. In addition to the importance of the town from a

maritime standpoint, it is a railroad point of some prominence. The two divisions of the Great Northern railway, the New Westminster & Southern, and the Fairhaven & Southern effect a junction at this point.

The manufacturing industries of Blaine include three large sawmills and several shingle mills. The Point Roberts cannery, located on Semiahmoo spit, directly opposite Blaine across the harbor, is a very important industry at this point. A full description of the working of this great salmon-canning plant, fully illustrated with scenes typical of the fishing interests here will be found published in connection with the present article. The leading exports from Blaine are lumber, salmon, oysters and clams, fruit and vegetables. The latent resources of the section tributary to the town are mines of coal, iron, copper, lime, and several ledges of fine sandstone have been discovered in this district.

Blaine is a flourishing town of about 2,500 population, and it is one of the prominent centers of population located on the shores of Puget Sound, in the Northwestern part of Washington.

On the Canadian side, just across the boundary line between the United States and British Columbia at Blaine, Washington, is the popular and well known hotel, known as the St. Leonard. This hotel is conducted by J. B. Atkinson. The house enjoys an enviable reputation for its well kept apartments and its first-class table. Tourists will find excellent opportunities for the use of the gun and rod in close proximity to the St. Leonard. The popular manager of the St. Leonard enters fully into the spirit of the sports of his guests and he caters to their every comfort.

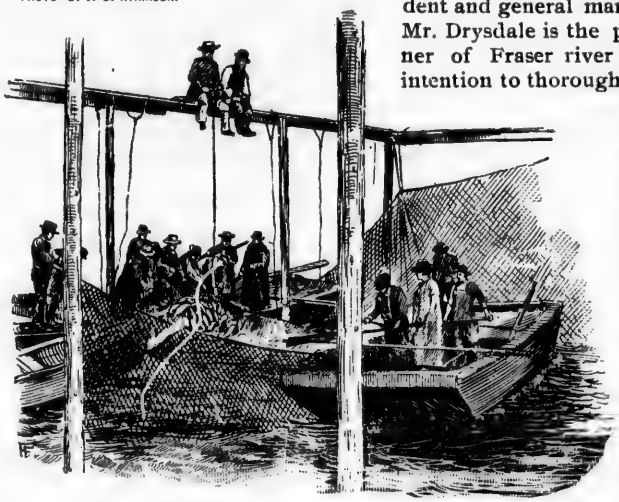
The Point Roberts Canning Company.—Among the great industries of the Pacific Northwest the canning of salmon takes high rank and it is yearly increasing in importance. It was for many years believed that the Columbia river salmon, known as the chinook, was superior to any fish running up the rivers of the Pacific coast. Latterly, however, the variety of this palatable fish known as "sockeye," which makes its freshwater haunts in the Fraser river, in British Columbia, has rapidly gained in repute with consumers until it is now recognized as standing in full equality with the Columbia river salmon, and it is by many English and Australian consumers even preferred to that famous fish on account of its deeper tinted flesh.

POINT ROBERTS CANNING CO.'S (DRYSDALE'S) SALMON TRAP.

Recognizing the excellence of the "sockeye," or Fraser river salmon, and

satisfied that it must continue to grow in public esteem, Mr. Daniel Drysdale established a salmon cannery on Semiahmoo peninsula, opposite Blaine, on the northwestern boundary of the United States in 1891. He incorporated the Point Roberts Canning Company in 1892, remaining president and general manager of the concern. Mr. Drysdale is the pioneer American canner of Fraser river salmon and it is his intention to thoroughly introduce his brand into the United States, believing as he does that it will continue to grow in popularity and stand comparison with the leading brands of the Columbia river. In England, Australia and other British colonies, this fish is already well known, where it is in great demand and is highly esteemed by epicures and bon-vivants. In a few localities it has the proud distinction of having ousted its great rival from the first place, as is proved by the fact that it already commands a higher price in some markets than does the Columbia river canned salmon. Mr. Drysdale's belief has always been that salmon are of better quality when taken from deep salt water on their annual spawning migrations up to the Fraser than they are when caught in the fresh waters of the river. He therefore established his traps in the Gulf of Georgia and his daily catch from the briny waters here is taken to the cannery alive and in prime condition. Experts admit that the salt-water-caught fish are of superior grade, and Mr. Drysdale is reaping the benefits of his correct judgment and foresight.

PHOTO BY J. B. ATKINSON.



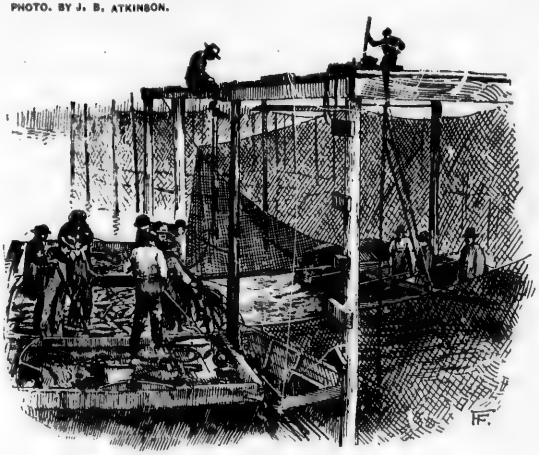
CATCHING SALMON, POINT ROBERTS CANNING CO.'S (DRYSDALE'S) TRAP.

The "sockeye" variety of salmon has a deep red and rich appearing flesh, firm and fat, and it improves by canning. The oil contained in the fish gives it a rich flavor, keeps the meat moist and palatable and preserves its excellent quality in all climates. This has been an important factor in establishing and maintaining its reputation. Today the Point Roberts Canning Company finds a ready market for its pack in England and Australia and Mr. Drysdale expects with increased facilities for canning to introduce the fish into the United States markets in full faith that it will meet with the same acclaim and recognition it has won from connoisseurs abroad.

The company's cannery now contains all the latest improvements for canning and the closest daily supervision is exercised to see that only the best fish are packed by the best and cleanliest methods. About 15,000 fish are packed daily during the season and the catch at times runs as high as 30,000. A cold-storage warehouse forms part of the plant of the company and the fish are kept here in perfect condition for

canning. There is no doubt but that the facts referred to above as to quality of the pack and the care exercised in maintaining the reputation of the brand will in the near future render it necessary for the Point Roberts Canning Company to double their packing facilities to meet American and foreign demand for their product. Two brands of equal grade, but with different labels to avoid complications are now put up by the company. These are the Scroll brand for foreign and the Medallion for the American trade.

PHOTO. BY J. B. ATKINSON.



"A HAUL," POINT ROBERTS CANNING CO.'S (DRYSDALE'S) SALMON TRAP.

Port Townsend, Washington.—Port Townsend, on the bay of the same name, is located on the eastern side of Quimper peninsula, and is on the shores of the eastern extremity of the Straits of Fuca. Its position at the head of Admiralty inlet, the main channel of Puget Sound through which vessels sail to and from the wharves of Seattle, Tacoma and Olympia, has earned for it the title of the "Key City." Port Townsend is the United States port of entry for the Puget Sound district, and it may be stated in this connection that it is one of the leading ports of entry on the coast. The harbor in front of the city is highly commended by mariners as being easily accessible at all times, as being perfectly sheltered, and as affording safe anchorage for vessels during the severest of storms.

U. S. CUSTOM HOUSE, PORT TOWNSEND.

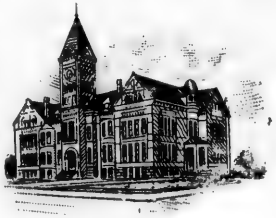
Port Townsend is one of the oldest established towns in the state of Washington. Until 1888 the town was prosperous, its merchants carrying large stocks of goods, and its trade being heavy and of a most satisfactory nature, but the population of the place before that time was small. Since 1888 Port Townsend has made a wonderful increase in population, the city has spread out to treble its former size, many fine public and private buildings have been erected, and while the general depression which has been seriously felt at this point during the past two years has greatly retarded the growth anticipated here, Port Townsend is still one of the large cities on the shores of Puget Sound, and it is in the line of advancement which will some day make it one of the prominent centers of population of the coast.

Shipping to the extent of over 2,500,000 tons is annually entered and cleared at the Port Townsend custom-house. The city has now connection with San Francisco by the line of the Pacific Mail Steamship Company's steamers, and transfers

COURT HOUSE, PORT TOWNSEND

are made at Port Townsend by this line for Alaska ports. Daily steamers ply between Port Townsend and Victoria, British Columbia, as well as between Port Townsend and the principal ports of Puget Sound. A line runs from this place to the points located on the Straits of Fuca as far west as Neah Bay. During the halcyon days of Port Townsend's boom, the Oregon Improvement Company was liberally subsidized by the city to build a line of railroad from this place to Olympia, with an ultimate extension to Portland. Thirty miles of this road were built, reaching as far south as Quilcene, and this line is now operated by the Port Townsend Southern Railway Company. The company hopes to get its financial affairs so shaped in the near future that it will be possible for them to extend this road to Olympia. Port Townsend is the judicial seat of Jefferson county.

During the past few years some very fine buildings have been erected at Port Townsend. The magnificent custom-house building, standing on the high bluff back of the main business part of the city, is constructed entirely of stone taken out of local quarries, and its erection involved an outlay of $250,000. The Central public school building was erected at a cost of $70,000, and the construction of the fine city hall cost $50,000. A number of very fine three, four and five-story stone and brick business blocks line the main thoroughfare. A number of important manufacturing plants are located at Port Townsend, chief among which are extensive nail works now being successfully operated here. The city claims a population of about 5,000, and its finances are in a healthy condition.



CENTRAL PUBLIC SCHOOL, PORT TOWNSEND.

Port Angeles, Washington.—Port Angeles, as the first port of approach on the American side for ships entering the Straits of Fuca, occupies much the same position in relation to the Northwestern coast of the United States as Victoria does to the province of British Columbia. The harbors at Port Angeles and Victoria afford ships visiting Puget Sound the first safe and easy anchorage after entering the straits from the ocean.

The origin of Port Angeles is historic. It was selected by the government as a government reserve during Lincoln's administration and a townsite was laid out here at the time. It is significant in this connection that Port Angeles was the only townsite ever platted by the United States government with the exception of the national capital, Washington, D. C. The motives which led to the passing of the act setting aside the townsite of Port Angeles as a government reserve can only be conjectured at the present time. It is assumed, however, by those who are thoroughly familiar with the location of Port Angeles that the motive of the government in passing the act was a recognition of the many advantages of Port Angeles as a point for offensive and defensive operations to keep in check the large English interests in Canada should Great Britain have espoused the cause of the Confederacy, which then seemed probable. Three thousand acres were included in this reserve. The provisions governing the act making this a reservation were such, however, that any American citizen was allowed to locate a homesite 100 x 140 feet on this reserve,

provided he cleared the land, built a cabin and actually resided on the site he located. These rights have been extensively used and as a result of this liberality some 1,500 squatters' cabins are now scattered over this reservation.

The long natural spit which encircles the harbor at Port Angeles has been wholly reserved for national purposes. On this spit the Ediz Point lighthouse was erected and this is now maintained by the government. The oval basin lying between the spit and the shore line is the harbor of Port Angeles. This harbor is perfectly protected against rough seas, and its total area is about nine acres.

Port Angeles is now a port of entry and a large number of vessels are now annually entered and cleared from this place. The town is distant from Victoria but 17 miles, and the establishment of an international ferry is now contemplated between the two points.

A vast stride in the advancement of Port Angeles was made early in 1893 by the raising of a bonus of $350,000 to secure the construction of the Everett, Port Angeles & Pacific railroad. By means of this road to Port Ludlow and a ferry which will be established to cross the waters of the Sound from this latter point, the water route being 21 miles in length, Port Angeles will be connected direct with the Great Northern and Northern Pacific systems of roads at Everett, Washington, on the mainland proper of the Puget Sound section.

The present population of Port Angeles is about 5,000. It is the chief city as well as the judicial seat of Clallam county, and has the advantages of an excellent electric light and water-works plant. It is surrounded by a rich section of country and, with the completion of the railroad system terminating here, will become one of the leading cities on the shores of Puget Sound.

Orting, Washington.—Orting is an important station on the Northern Pacific railroad, 18 miles east of Tacoma. The Tacoma, Orting & Southeastern railroad runs from this point to the lumbering regions of the Muck and Sucotash valleys. The town is the center of a rich farming district, where the raising of hops is extensively carried on. The main street is on a direct line with Mt. Rainier and it is here that the incomparable peak reveals itself in its full glory.

Orting has a bank, three churches, an excellent public school, several hotels, and two saw and shingle mills. One and one-quarter miles distant from the town is a beautiful spot where, surrounded by pastoral scenes, 100 veterans of the Union army pass their declining years. It is here that the Washington State Soldiers' Home is located. The buildings of the home occupy the center of a grassy plat. The structures occupied by the home consist of two large main buildings, a hospital, several neat cottages, the handsome residence of the commandant, and a number of smaller buildings. The site of the home covers an area of 183 acres. The home has accommodations for 160 inmates, and it is a model institution in every respect.

STATE SOLDIERS' HOME, ORTING.

Buckley, Washington.—The important lumbering center of Buckley is picturesquely situated in a heavy forest near the foothills of the Cascade Mountains, on the Northern Pacific railroad, 31 miles east of Tacoma. Forty miles east of Buckley the railroad passes through the great Stampede tunnel, and from that point descends the eastern slope of the Cascades into Eastern Washington.

Flowing through Buckley is the White river, a turbulent mountain stream, that rises among the enormous glaciers of Mount Rainier. Along this stream is splendid trout fishing. Many charming views of mountain and river scenery are obtained from its banks. Buckley is now a town of 1,400 inhabitants. It is attractively laid out, with broad streets, nearly all of which are planked. Most of the buildings on the main business street are substantial two-story brick structures. The public school is a handsome eight-room frame building, surrounded by a neat lawn. The streets, as well as nearly all the business blocks and residences, are lighted by electricity. The town has a fine system of water works, which cost about $13,000. The supply of water for city use is obtained from White river.

PHOTO. BY SIEWERT, PUYALLUP.

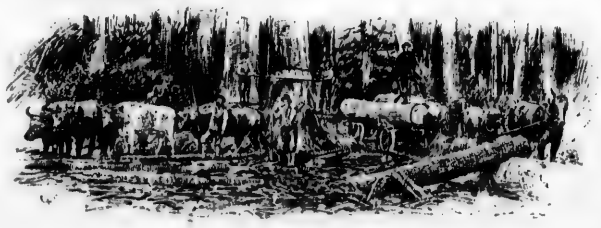
HEAD OF WHITE RIVER.

On the 5th of May, 1892, Buckley was nearly completely destroyed by fire. In rebuilding the town the energetic citizens replaced many of the frame buildings with brick blocks, and they adopted every precautionary measure to prevent a repetition of the disaster. In the immediate vicinity of Buckley the raising of hops is an important and growing industry. The soil of the lands near the town is especially adapted to hop culture. It does not differ from the soil of the lands in the famous Puyallup valley near Tacoma.

STREET SCENE, BUCKLEY.

Buckley is one of the most important of the smaller lumbering towns of Washington. Its close proximity to the mountains makes it an advantageous point from which to ship lumber to the treeless prairies of Eastern Washington. There are located here three sawmills. These mills, when running, furnish employment to over 200 men. One of these mills is one of the most perfectly equipped sawmills in Washington. This mill was built in the fall of 1893 and is owned by the Buckley Lumber Company. It is equipped with new engines and boilers of the most approved pattern and with a new set of Alice machinery and band saws. It is supplied with a complete set of planing machinery. Adjoining the mill is a dry-kiln with a capacity of 25,000 feet a day. The mill employs 60 men and has a capacity of 80,000 feet of lumber per day. The officers of the company are as follows: W. P. Sargeant, president; W. L. Bartholomew, vice-president;

PHOTO. BY FOSEIDE.



LOGGING, BUCKLEY.

S. L. Sargeant, treasurer and E. L. Jacobs, secretary. Mr. W. P. Sargeant for some years took a prominent part in public life in Minnesota. He is now contemplating establishing a branch yard at Minneapolis. The Buckley Lumber Company now have branch yards at North Yakima, Washington and Athena, Oregon. It is prepared to fill orders for all sizes and quantities of fir, spruce, cedar and cottonwood lumber, lath, pickets, shingles and mouldings.

Roslyn, Washington.—Roslyn, the largest coal-mining town on the Pacific slope, is located in Kittitas county, on a branch of the Northern Pacific railroad, four miles north of CleElum, on the main line. CleElum is 101 miles east of Tacoma, and 28 miles northwest of Ellensburgh.

PHOTO. BY OSCAR JAMES.

25-TON BLOCK OF COAL, SHIPPED FROM ROSLYN, WASH., TO WORLD'S FAIR.

The celebrated coal mines of the Northern Pacific, among the great mines of Washington, are located at Roslyn. Of the 3,500 people residing in the town, over 1,000 are employed in the company's mines here. The miners receive good wages, which has enabled nearly all of them to occupy their own houses, many of which are attractive cottages, furnished in a comfortable manner. Roslyn contains a large number of retail stores, a bank, several churches and a large four-room school house. The daily attendance at the public school here averages about 325 scholars.

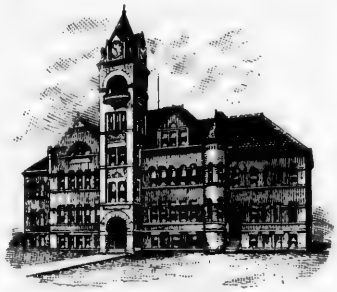
Located at Roslyn is a large wood-working plant owned and operated by Mr. Charles S. Adam. This gentleman arrived in Roslyn when the town contained only three tents and commenced work at his trade. In the following years Mr. Adam became connected with every enterprise tending to promote the interests of Roslyn, and from a small beginning he has managed to build up a large sash, door and moulding factory, the output of which is now in great demand at Roslyn, and in the immediate vicinity.

Another large establishment at Roslyn, is the Roslyn Brewing Company. This company commenced the work of erecting a brewery in October, 1892, and in the following December, they placed upon the market their first brew of beer. The excellence of this beverage soon caused it to attain a wide-spread popularity in Kittitas county trade. Since that time the brewery has managed to build up an extensive and profitable business in Roslyn and the neighboring towns. At the present time there is more of this beer sold at Roslyn and CleElum than any other brand. The buildings occupied by the brewing plant cost about $8,000, and they are owned by Mr. Ernest Durawachter and Henry Racar, the principal stockholders of the company.

PHOTO. BY OSCAR JAMES.

PUBLIC SCHOOL, ROSLYN.

Ellensburgh, Washington.—Ellensburgh is situated a few miles distant from the foothills of the Cascade Mountains in the fertile valley of the Yakima river. It is the judicial seat of Kittitas county and has a present population of about 3,200. It is on the main line of the Northern Pacific railroad, 126 miles east of Tacoma and 273 miles west of Spokane. It is a rich and thriving center of trade and is one of the important inland cities of the state.



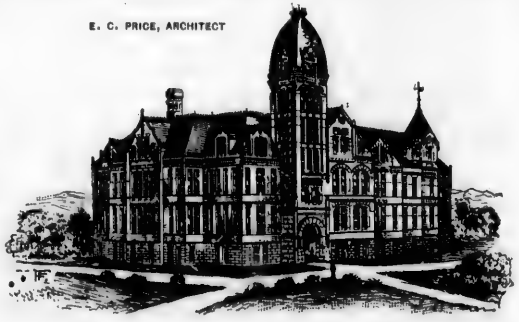
PUBLIC SCHOOL, ELLENSBURGH.

The first settlement at the present site of Ellensburgh was not made through any knowledge of the richness of the surrounding country, but for the reason that this was the most available site for the location of a store and trading post on the then existing stage route through Eastern Washington. In 1871 John A. Shoudy opened a store at this point and the small settlement that subsequently sprung up around his store was at a later period christened Ellensburgh. The growth of the primitive town was slow, and in 1886 its total population was only 520. In the latter year it was incorporated as a town, however, and it then began to attract attention among the growing settlements of the state.

The completion of the line of the Northern Pacific to this point infused a new life into the town, and with the coming of the iron horse the population began to rapidly increase and outside capital began to seek investment here. About the time, however, that the place was fairly on its feet and the prospects for business and rapid growth were most encouraging, Ellensburgh was almost entirely swept out of existence by the great fire of July 4, 1889. Outside capital was offered the people here for rebuilding the town, and plans were at once formulated for a resurrection of the city on a more extensive basis than it had occupied before. The streets were widened and evenly laid out, fire limits were established within which no wooden buildings were allowed and every provision was made for the important city that was to spring up at this point. Many blocks of fine brick and stone buildings were erected. There is today a notable absence of wooden buildings in Ellensburgh and the claim is made that the city today contains more brick buildings in proportion to its population than any city in the West.

The location of Ellensburgh is a favorable one. It occupies a position near the geographical center of the state. It occupies a site in a rich valley 25 miles in length, the soil of which possesses a wonderful fertility. Farming here on an extensive scale is only practicable by the aid of irrigation, but water for irrigation purposes can easily be obtained in any desired quantity. Small fruits and vegetables do particularly well on this land. Large quantities of hay, principally timothy, are annually shipped from Ellensburgh and this hay brings from $10 to $15 a ton. Three crops of alfalfa are cut on the lands of this valley each season.

The educational facilities of Ellensburgh are of the highest order. The public school is taught in a fine brick building which was erected at a cost of $50,000. In addition to the excellent public schools, Ellensburgh is the seat of the Washington State Normal School,



STATE NORMAL SCHOOL, ELLENSBURGH.

which occupies an imposing brick and stone structure of modern design. It contains 15 large class rooms and an auditorium with a seating capacity of 400 people. The location of this state institution at Ellensburgh is a source of great gratification to its citizens and doubly so because Mr. Eugene C. Price, a local architect, was awarded the contract for drawing the design of the building and superintending its erection. Mr. Price learned the building trade at The Dalles, Oregon, and subsequently in carrying out large contracts in that state and in Washington, he acquired a thorough knowledge of architectural designing, which knowledge was greatly improved by a long course of study. Mr. Price arrived in Ellensburgh in 1888, and in the following year, just after the great fire, his services were in great demand in the city of his adoption. The attractive appearance of Ellensburgh is largely due to his plans and suggestions, which were carefully followed out in the rebuilding of the city.

E. C. PRICE, ELLENSBURGH.
ARCHITECT, WASHINGTON STATE NORMAL SCHOOL.

The city of Ellensburgh owns its own electric light plant, which was constructed at a cost of $50,000. The sum of $50,000 was also expended on the fine water-works system of the city, which is owned by a private corporation. The five flouring mills established at this point have a daily capacity of 350 barrels of flour. Ellensburgh is the end of a division of the Northern Pacific railroad, and the company has erected here a roundhouse and large repair shops, which furnish steady employment to a number of men. In addition to the flouring mills, a sash and door factory, and a sawmill are kept constantly running at this point.

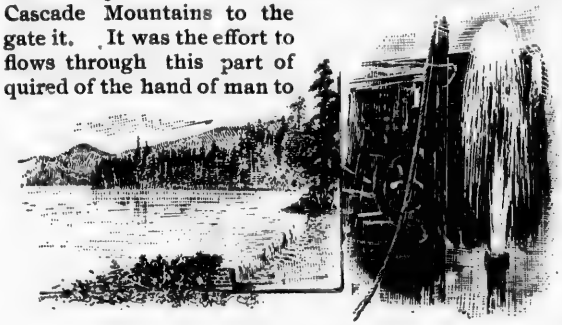
Surrounding Ellensburgh, and directly tributary to the city, is a highly productive farming district, which is rapidly being filled with a desirable class of settlers. In addition to this farming wealth, however, Ellensburgh is the seat of considerable mining activity. Thirty miles distant from the city are the famous placer and quartz mines of the Swauk, Pechastin and other mining districts. The Swauk placers are very rich in both gold dust and nuggets. In this district pockets are frequently found containing from $1,000 to $3,000 each in native gold. The Swauk placers are now the most productive placers in Washington, and when the primitive methods of mining now in use here are superseded by improved hydraulic machinery the output of the district will be greatly increased. The Pechastin district contains, in addition to valuable placers, a number of fine quartz ledges on which extensive development work has already been done. The entire output of these several mining centers is brought to Ellensburgh, thus making this point the clearing-house for a vast amount of wealth. The furnishing of outfits and supplies for the miners is an important part of the trade enjoyed by Ellensburgh.

In the vicinity of Ellensburgh are also extensive deposits of iron ore, which are made all the more valuable by the existence in close proximity to them of almost inexhaustible beds of coal, the finest fluxing lime, and an unlimited supply of charcoal timber. The carbonate of lime found here analyzes 85 per cent chloride of lime, and it makes a fine hydraulic cement. Another mineral resource of the district lies in the enormous deposits of graphite found near Ellensburgh. These

deposits can be traced for miles. The value of these deposits has not, as yet, been determined, as they have not been worked up to the present writing. Near the rich coal drifts, within five miles of Ellensburgh, is a 12-foot vein of fire clay and "blue joint," which could be used for making Dresden china. Large deposits of clay also exist in this district from which excellent sewer-pipe, terra cotta and pottery can be made. The mineral wealth of the country tributary to Ellensburgh is susceptible of great development, and this, in time, will furnish one of the principal sources of revenue to this rapidly growing city.

North Yakima, Washington.—North Yakima, the chief commercial center of the great section of Washington lying between the Cascade Mountains on the west and the Columbia river on the east, is located in one of the fertile valleys of the Yakima river. It is a station on the main line of the Northern Pacific, 164 miles east of Tacoma, and 242 miles west of Spokane.

North Yakima is one of the most attractive cities in the state of Washington. The site occupied by the city was, but a few years since, a sagebrush waste. Nature, however, provided here a fertile soil and furnished from the great reservoir of the Cascade Mountains to the west plenty of water to irrigate it. It was the effort to control the water which flows through this part of the state alone that was required of the hand of man to make this section highly fertile. Vast sums of money have already been spent in perfecting the irrigating systems centering at North Yakima, and many miles of great irrigating ditches today carry water to all parts of the Yakima valley, and the country immediately surrounding North Yakima is made up of fertile meadows, fine hopyards and well-kept orchards.



LAKE KITCHELAS AND ARTESIAN WELL, NORTH YAKIMA.

The broad streets of North Yakima are lined on either side with beautiful shade trees, and along the sides of these streets flow streams of living water which are kept full during 9 or 10 months of the year. The profusion of trees, shrubbery, flowerbeds and well-cared-for lawns, combine to make this a city of surpassing beauty and attractiveness.

The climate of this part of the state is not without the extremes of heat and cold, and yet the days during the hottest part of the summer are not uncomfortable, and the rigor of winter in the Middle Western states is altogether avoided here. On the broad plateau of Washington, on which North Yakima is located, the air is dry and bracing, and this is one of the healthiest localities on the coast. The long, dry summers are made pleasant by the cool breezes which sweep down from the Cascade Mountains, and the autumns are unsurpassed even in California. The rainfall in this part of the state is light, but the swift-flowing streams of water which course through every street furnish sufficient moisture for irrigating purposes, and throughout the long, dry summers at North Yakima the lawns and gardens of the city present the bright, green verdure of spring.

PHOTO. BY E. E. JAMES.

NATCHEZ RIVER AT NORTH YAKIMA.

The valleys which converge at North Yakima are the Wenas, Natchez, Cowychee and Ahtanum. The streams which flow through these valleys have their source in the Cascade Mountains, and they empty into the Yakima river. The four tributary streams of the Yakima river, near North Yakima, flow through valleys varying in width, respectively, from 1 to 3 miles, and about 20 miles in length. The Yakima river, the main water-course of this part of the state, carries a large volume of water during the entire year, and it furnishes a source of supply for irrigating purposes that is easily made available.

All farming and gardening in the section surrounding North Yakima is done by means of irrigation. Hundreds of thousands of acres of land here are being reclaimed and made highly productive by means of irrigation. The great irrigating ditches with their laterals spread out in every direction in this part of the state. North Yakima is the headquarters of a number of large irrigating companies, which are now engaged in perfecting great irrigating systems here. Vast sums of money are regularly expended in this work. When all the irrigating ditches now outlined in this system are completed, the entire section of country extending from North Yakima on the west, to the Columbia river, 90 miles distant to the east, will be converted into rich farms, which can be made as highly productive as any farming land on the coast.

COLUMBIA SCHOOL, NORTH YAKIMA.

About four miles south of North Yakima, the valley in which the city is located is encircled by a range of mountains, through which flows at Union Gap, the Yakima river. From this point the stream enters a broad plain. On one side of the river this plain is occupied by the Yakima, Klickitat and other tribes of Indians, and forms the Simcoe Indian Reservation. The reservation is naturally well watered by the Toppenish and Satas rivers. The waters from these streams spread out over the low lands adjacent, making rich grazing meadows for the cattle and horses of the Indians. The valuable lands comprised in the reservation will some day be thrown open to settlement, and it will all then contribute directly to North Yakima's wealth and prosperity.

The population inhabiting the country tributary to North Yakima are engaged principally in the pursuits of agriculture, horticulture and stock raising. Ten or fifteen acres of the land in the vicinity of the city, if carefully tilled, will easily support a family, and a man owning 50 acres of land here is considered well off. In the district are about 3,000 acres which are devoted to the cultivation of hops which do exceedingly well here. It is worthy of note that this is the only district in the world where hops are grown by means of irrigation. With the most careful cultivation and good care an acre of this land will yield annually about 2,000 pounds of hops, and as the average cost of picking, curing and baling this crop is about 8½ cents a pound, and as the average selling price of hops for 15 years past has been 18 cents a pound, it will be perceived that hop raising here is attended with the most

profitable results. During the eight years that hops have been cultivated in the Yakima district, vines have never suffered from the pest known as the hop louse. Occasionally it appears on the vines in the early spring, but it invariably disappears with the advent of hot, dry weather of the early summer months, and hop-growers here have never been compelled to resort to spraying as a means of destroying hop lice. During the present year [1894] it is estimated that this section will produce at least 20,000 bales of hops.

CENTRAL SCHOOL, NORTH YAKIMA

Another leading occupation of the farmers here is fruit growing on an extensive scale. All kinds of fruit indigenous to the temperate zone do well here. The orchards of this section annually yield large quantities of the finest quality of peaches, pears, grapes, apples and quinces, and the smaller varieties of fruits such as strawberries, blackberries, raspberries, currants, etc., do equally as well as the larger fruits. All kinds of grain are grown as well here as in any part of the West, but the farmers of this section have found that other crops yield better returns, and for this reason they have turned their principal attention to other pursuits than grain raising.

The Yakima country is a splendid grazing section, and pastured on the fine bunchgrass lands of Yakima county are thousands of horses, cattle and sheep. The county is also rich in minerals. Placer mining has been carried on to some extent in the county for many years past, and in the vicinity of North Yakima are a number of quartz ledges that will probably prove valuable when developed. Wide coal measures of a high grade of lignite coal extend through the county and as far east as the Columbia river. Marble, limestone and clay and iron are among the leading minerals found to exist in large quantities in the section tributary to North Yakima. The mines here are yet practically undeveloped, but better transportation facilities and an increased population will do much to encourage the opening of the rich mines that have laid so long with their latent stores of wealth.

North Yakima itself is a typical prosperous Western city. It contains today a population of 3,000 which is enterprising and alert. Most of the people who have settled here came from the East and the Central West. The city presents a busy appearance, and its stores, warehouses and elevators all do a large business. There is not at the present writing a vacant store or office in the city, and the large number of farmers from the surrounding country who regularly come here to do their trading impart a particularly lively appearance to the streets. The city at the present time may be said to depend solely for its support on the rich agricultural belt surrounding it. The city is making constant and rapid advancement, however, and the people here look for the place to double its population during the next five years.

J. G. LAWRENCE, NORTH YAKIMA.

North Yakima affords its youth the best of educational advantages. In the two large brick public schools of the place 13 teachers are employed and the total enrollment of pupils daily is about 550. In addition to the public schools, the place supports a private

academy and a Catholic parochial school. In Yakima county outside of the city, 3,000 pupils attend 33 schools. The county school property is today valued at over $100,000. The perfection of the excellent public school system of Yakima county is largely due to the efforts of Prof. J. G. Lawrence, who is now filling a second term as county superintendent of schools. Prof. Lawrence, who is also a member of the state board of education, has been actively engaged in school work for 20 years past. Before commencing his work as an instructor, Prof. Lawrence attended the State Normal School at Carbondale, Illinois, and subsequently he was engaged for a number of years in educational work in Kansas and Illinois. He came to North Yakima in 1888. For two years Prof. Lawrence was principal of the public schools at North Yakima, a position he resigned when he was elected to the important office he now holds.

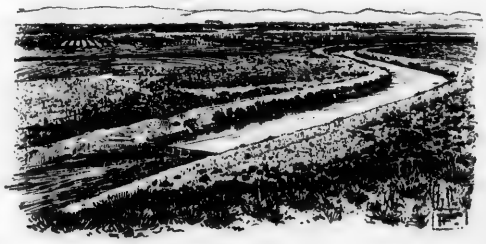
There are two national banks at North Yakima with a combined capital of $150,000. The city also boasts of a fine electric light plant, a complete water-works system and an efficient fire department, equipped with the best of apparatus for fighting fire. The business streets are lined with many fine business blocks, and scattered over the city are many costly and elegant private residences.

The near completion of the canal of the Northern Pacific, Yakima and Kittitas Irrigation Company, 35 miles long, will open to settlement 65,000 acres of land in this part of the state. The other irrigating systems of great magnitude are those of the Prosser Falls and Priest Rapids Canal Company, known as the Leadbetter Ditch, which is 80 miles long and will reclaim over 100,000 acres, the canal of the Yakima Improvement and Irrigating Company, which was completed last year and irrigates about 12,000 acres, the Selah Valley Irrigation Company's ditch, covering 27,000 acres, besides numerous smaller ditches, which will reclaim for cultivation nearly all the land lying in the valley of the Yakima river. The settlement of this vast district, which has so long remained unoccupied, will lead to a rapid increase in the population and wealth of North Yakima, and it is not unreasonable to hope that this will become in time one of the most important inland cities of the Pacific Northwest embraced in the limits of the great states of Oregon, Washington and Idaho.

The Yakima Valley.—This part of the state of Washington is now attracting wide-spread attention on account of the efforts being made to reclaim a large part of its arid land by means of irrigation. A few years ago a barren and uninviting sagebrush waste greeted the eye of the traveler journeying through this part of the state. Today a large portion of this land is highly cultivated and some of the finest farms and orchards in Washington are found in the Yakima valley.

Winding its way through the Yakima valley to the Columbia river is the Yakima river, a large stream which finds its source in the perennial snows of the Cascade Mountains. This river drains a watershed of about 2,500 square miles and its entire basin is nearly 200 miles in length. The western part of this basin in pre-historic ages consisted of four great lakes enclosed by mountain ranges, now

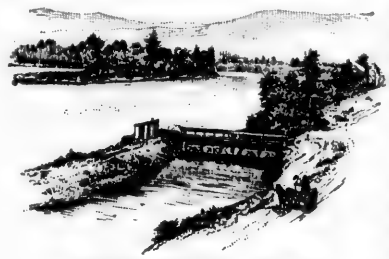
PHOTO. BY CARPENTER, TACOMA.



SUNNYSIDE CANAL, YAKIMA VALLEY.

cut through by the Yakima river. In some great convulsion of nature the water of these lakes was drained off and the heavy luxuriant vegetation along the shores of these great bodies of water withered and passed away from lack of moisture. The beds of the old lakes remained for unknown centuries a dusty desert covered by sagebrush and scattered tufts of bunchgrass.

About the year 1860 a small itinerant body of men driving their flocks before them, reached the Yakima valley. They sought here a means of livelihood in a region that had always been deemed worthless for agricultural purposes. It did not take these pioneers long to discover, however, that the soil of this valley was remarkably rich, and where it was possible to get water to it, it could be made to blossom as the rose. Sheep raising at that time, however, was an extremely profitable industry in these parts, and for a number of years this was the principal calling followed by the early settlers of the valley. Among the people who formed the second tide of immigration to the Yakima valley were practical farmers, who at once commenced the work of digging irrigation ditches through the valley. These men set out orchards, planted hop yards and they commenced the work of farming on a small but a profitable scale. The success which attended the efforts of these farmers soon attracted the attention of capital to this part of the state. Something over $2,500,000 is now being expended in building canals and lateral ditches through this part of the state. This great irrigation system when completed will redeem over 300,000 acres of land in the Yakima valley. All of this irrigated land is highly productive, and being cleared ready for the plow in its native state, it offers excellent opportunities for the attention of the husbandman.

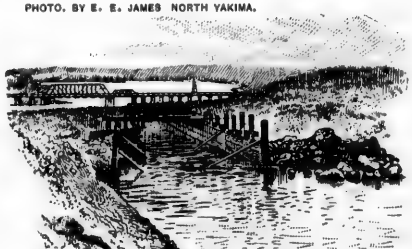


FLOOD GATE, SUNNYSIDE CANAL, YAKIMA VALLEY.

In 1892, the Northern Pacific, Yakima and Kittitas Irrigation Company built what is known as the Sunnyside canal. This canal waters 65,000 acres of land. In December, 1891, work was begun on the Leadbetter system of canals, the first work being done on the Yakima & Kennewick line, which has since been disposed of to the Yakima Improvement & Irrigation Company of Kennewick.

In June, 1892, construction work was begun on the Columbia and Yakima canal. This canal is practically finished at the present writing. It is the longest canal in the Northwest, its length being about 60 miles. The canal takes its water supply from the Yakima river at Prosser falls, and running parallel with the river through costly flumes and rock work, at the end of 20 miles reaches Kiona. At the latter place it crosses the river at an altitude of 167 feet in a five-foot steel pipe, thence it flows southeasterly for another 20 miles, when it emerges out upon the broad, level plains of the Columbia, where it waters 27,000 acres of

PHOTO. BY E. E. JAMES NORTH YAKIMA.



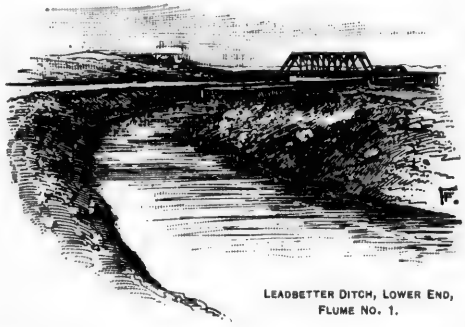
HEAD FLUME 1, LEADBETTER DITCH, YAKIMA COUNTY.

the most fertile soil imaginable. This section is destined to become one solid fruit and hop farm, as the climate here is more particularly adapted to these industries than is even the rest of Yakima county. The "Chinook" winds which follow up the Columbia river from the Japan current, temper the cold of the winters to almost Southern California mildness, and usher in the springtime from two to three weeks earlier than it arrives in the upper Yakima valley, only 50 miles away. Kennewick, on the Columbia, is almost 1,000 feet lower than North Yakima, being less than 300 feet above sea level.

PHOTO. BY E. E. JAMES.

LEADBETTER DITCH, NEAR KENNEWICK, YAKIMA COUNTY.

This mildness of climate and early spring insure the farmer against losses from late frosts and make the raising of peaches and prunes as certain as that of the hardier varieties of fruits. These conditions also give them the control of the early market in Tacoma, Seattle, Spokane and Portland. In 1893, five months from the time of the clearing of the sagebrush from the land, a farmer in this locality picked 1,200 pounds of hops to the acre, equal to a gross return of $225 per acre, or a net profit of $125 per acre. This for a first year's crop, during a year when, owing to unfavorable weather, almost all hops planted in other localities failed to produce any first year's crop, is a remarkable showing. This region is also especially adapted to the raising of the Tokay grape, which is the best for green shipment. Fruit rates to the great non-fruit-producing portions of the United States are from a quarter to a half as much as they are from California, besides a difference in time of from two to five days in getting the fruit to market. These advantages greatly increase Yakima fruit-producers' profits and allow the fruit to ripen on the trees instead of in transit, thus improving the quality greatly. Here two or three transcontinental lines of railroad, the Northern, Union and Great Northern, all traversing or connected with this locality by the broad, open highway of the Columbia river, which according to the reports of government engineers, car-

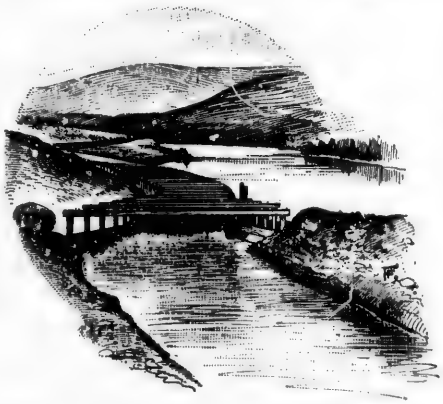


LEADBETTER DITCH, LOWER END, FLUME NO. 1.

LEADBETTER DITCH, SECTION OF DITCH ABOVE FLUME NO. 2

ries more water at The Dalles, hundreds of miles above its mouth and above one of its largest tributaries, the Willamette, than the Mississippi does at New Orleans. The Government is now removing the obstructions, and in a few years the river will be open to the sea.

The Columbia & Yakima Irrigation Company was in 1893 merged into the Prosser Falls & Priest Rapids Canal Company, which is now building the canal larger, and the line crossing the Yakima river in the great pipe is but a small branch of the system which will water all of the valley of the Columbia from opposite Wallula to Priest rapids, a distance of almost 100 miles. The policy of these companies is most liberal to water-users and especially to those who have settled upon the government lands, and development and improvement are the order of the day.



PROSSER FALLS AND PRIEST RAPIDS CANAL, THREE MILES FROM HEADGATE. WIDTH OF CANAL, 18 FEET AT BOTTOM, 36 FEET ON TOP, 6 FEET DEEP; FLUME, 12 FEET WIDE, 6 FEET DEEP.

"Irrigation is King," and the time is not far distant when the cities of the Northwest will feel the reviving influences of the great principalities of wonderfully productive lands which are being reclaimed by this means. Other canal enterprises will ultimately bring into cultivation all the valley land lying between North Yakima and the Columbia river.

The Yakima country is broken by low mountain ranges running in an easterly and westerly direction. Between these ranges is a succession of small valleys which finally end in the broad Yakima prairie, 60 miles in length and from 10 to 15 miles in width. The Yakima river, after leaving the high peaks of the Cascades, follows a tortuous course for some distance and then enters a wide expanse of valley land known as the Kittitas basin. In this valley is located Ellensburgh, a prosperous town of 2,500 inhabitants. The stream from here descends rapidly and finally, 50 miles below Ellensburgh, emerges from a series of canyons into the broad and beautiful valley, in the center of which is located the prosperous city of North Yakima. Immediately beyond this valley, through a gap in the enclosing mountains, is the Yakima Indian reservation. Beyond this reservation the river follows a winding course through the rich Yakima prairie, which extends to the Columbia river. The principal town of this part of the valley is Kennewick.

The Yakima river is fed by the Kittitas, Katches, CleElum, Tannum, Natchez, Tieton and Ahtanum rivers. The Yakima river carries a sufficient volume of water to irrigate the entire lands of the valley through which it flows, and if necessary, water storage can be resorted to, this supply can be largely increased by saving the spring flood waters. The natural reservoirs are found in the basins of lakes CleElum, Katches, Kitchelas and Tannum. The combined surface area of these lakes is over 50 square miles. They could be made to store sufficient water to irrigate an area twice as large as that embraced in the Yakima valley. A large part of the

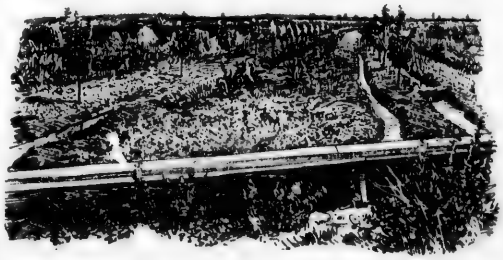
irrigation in this valley is carried on by means of ditches built by the farmers, either individually or in partnership. These ditches are from 1 to 15 miles in length, and they irrigate from 50 to 1,500 acres each. The fall of the Yakima river and its tributaries is sufficient to bring water into the ditches without the building of dams. East of the town of Yakima, in the Moxee valley, are two artesian wells, respectively 285 and 325 feet deep, which have a combined flow of 1.35 feet a second. The waters of these wells are used for irrigation purposes.

The irrigation projects now under way in the valley embrace systems of canals and lateral ditches extending from a point on the Natchez river, to above North Yakima, to the Columbia river, a distance of about 100 miles. Two hundred miles of main canal have already been built between these points.

All of the Yakima valley from the town of North Yakima down to the mouth of the river is a superior fruit country. The soil is of great depth and richness, and when it is well watered, its producing powers are wonderful. Four or five crops of alfalfa are raised from the same ground here every season. In the valley an alfalfa field over two years old will yield from 6 to 10 tons to the acre. The cost of raising and cutting this crop averages $1.25 a ton. At the present writing, alfalfa sells in the valley for $6.00 per ton. Taking the lowest yield of six tons to the acre, this would leave a net profit to the raiser of alfalfa here of $27.50 an acre.

The soil of the Yakima valley is perfect for hop culture. The yield of hops per acre here averages 1,900 pounds. Land that is carefully cultivated will yield from 2,000 to 2,800 pounds. The cost of raising a crop of hops in the valley and getting the crop to market is from 8 to 10 cents a pound. The average price received for hops is about 18 cents a pound. This leaves a net profit to the hop grower of this part of the state of $144 per acre. This region produced 12,000 bales of hops in 1893, and it is estimated that the crop of 1894 will exceed 23,000 bales. The hop louse, which is such a pest in most of the old hop-growing districts of the United States and Europe, has never done any damage in the Yakima valley. The steady, bright dry heat of the summer months here effectually destroys the pest when it does appear.

Next to the hop industry, fruit growing is the most important and remunerative business in the Yakima valley. This region produces most all of the semi-tropical varieties of fruits, including peaches, pears, cherries, prunes, all varieties of grapes, nectarines and apricots. All the fruit grown in the valley is of a superior quality, and is widely noted for its fine color and delicious flavor. A noticeable thing about the orchards of the Yakima valley is their clean and regular growth. Almost any of the many large orchards of this section might be selected for illustration in a nursery catalogue, so perfect are their form, and so heavily laden with fruit are the trees. The cities of Tacoma, Seattle and Spokane are distant from the principal points of the Yakima valley only about eight hours' ride by rail, and these markets are accessible with easy freight rates to them for the growers of Yakima valley fruit.



TWO-YEAR OLD ORCHARD, YAKIMA COUNTY.

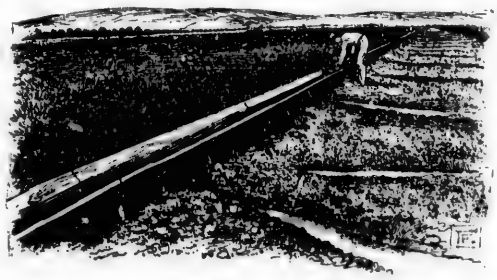
As an illustration of how profitable fruit growing can be made in the Yakima valley, the following facts are taken from sworn statements made by farmers residing near North Yakima. An orchard of 10 acres here netted its owner $3,000 in 1892. One-half acre of this produced in a season 4,000 pounds of Catawba and Delaware grapes, which sold for $250. In 1891 five acres of land produced $300 worth of melons, $200 worth of potatoes, $100 worth of grapes, $100 worth of onions, $100 worth of strawberries, alfalfa enough to keep a horse a year and sufficient garden produce to last two families for the same time. One Alexander peach tree here produced during the season of 1893 2,000 pounds of peaches which sold for $52.

The expense of grubbing sagebrush land and preparing it for an irrigated orchard, including the digging of small lateral ditches to distribute the water supply, can be estimated at about $10 per acre. The cost of trees and planting in peaches, prunes and apples is about $7 for young trees and $8 for labor per acre.

In the Yakima valley, land, under ditch, with a perpetual water right, costs from $40 to $60 an acre. A settler here can, therefore, estimate that 10 acres of orchard planted in young trees and supplied with water from irrigating ditches will cost about $700. Ten acres more planted in alfalfa and other crops will make a farm sufficiently large to support a family in comfort, and from a farm of this size which has been cultivated for three years or more an income can be derived of from $2,500 to $3,000 a year.

Prosser, Washington.—This recently established town is rapidly becoming one of the most important distributing and manufacturing points in the great Yakima valley. It is located on the main line of the Northern Pacific railroad, 41 miles west of Pasco and 50 miles east of North Yakima. The latter place has, within a few years, grown from a dozen houses to a prosperous city of 4,000 inhabitants. This growth is due solely to irrigation. The land at Prosser is identical with that at North Yakima. The country tributary to Prosser embraces hundreds of thousands of acres of land on which hops, most all the semi-tropical fruits, cotton, tobacco, and cereals of all kinds can be profitably raised. The fertility of this soil is shown by the statement that five crops of alfalfa are successfully raised here annually.

PHOTO. BY CARPENTER, TACOMA.



IRRIGATING, NEAR PROSSER.

Of the numerous irrigation projects for redeeming all of the arid land east of North Yakima, several are now nearing completion. The remarkable fecundity of the soil of this valley, the crops it produces, and the means by which it is irrigated, are fully described in an article on the Yakima valley published in this work.

Between North Yakima and the Columbia river, a distance of 90 miles, there will, in all probability, be but one important town, and this will be Prosser. This latter town is now the trading center of the exceptionally fertile part of the valley known as the Sunnyside country. This section is watered by the great canal of the North Pacific, Yakima & Kittitas Irrigation Company. The canal redeems 65,000

acres of land that is absolutely worthless without irrigation, and converts it into hop yards, orchards and gardens. Ten acres of this land, if carefully cultivated, will net from $1,500 to $3,000 a year.

The agricultural resources of the country tributary to Prosser will doubtless make it a town of 4,000 or 5,000 inhabitants. It has only been within the last three years that the Yakima valley has attracted wide-spread attention. It may be said to be but yet in its infancy. It is rapidly settling up, and the acreage of cultivated land in it is more than trebling each year. In 1892 the hop crop of the country adjacent to North Yakima was 5,000 bales. The following year the same section produced 15,000 bales, and 35,000 bales is considered a conservative estimate of the crop for this year. A discerning mind will see that Prosser, with as great and equally as rich an acreage of irrigated land as that tributary to North Yakima, will become one of the prosperous agricultural towns of Washington. At this point the Yakima river dashes down a rocky incline, forming a series of beautiful cascades, known as Prosser falls. The water power of these falls is estimated at 3,000 horse. This power can all be utilized for manufacturing purposes. A syndicate is now expending $150,000 in developing and utilizing this splendid water power. It now turns the wheels of a flouring mill with a capacity of 80 barrels daily. Of the 3,000 horse power here, 1,000 is controlled by Fred. R. Reed. This gentleman is the manager of the syndicate owning the townsite of Prosser. He has published several pamphlets descriptive of Prosser and the Yakima valley, which he will mail to any address on application.

Pasco, Washington.—Situated on the eastern bank of the Columbia river at a point one mile from where that stream is crossed by the main line of the Northern Pacific is the town of Pasco, the seat of Franklin county. It is the end of a passenger and freight division of the Northern Pacific, and it is here that a branch leaves the main line, crosses the Snake river at Ainsworth, a few miles to the south, and connects with the Union Pacific and the Hunt line of roads for Walla Walla, Waitsburg, Dayton and intermediate points to the east and Pendleton and all points on the Union Pacific to the west. Pasco is 146 miles from Spokane, and the distance from this point to Tacoma is 254 miles.

Pasco contains about 400 people. It has a public school, two hotels, a brewery and 12 stores. The immediate site which the town occupies in its present shape is not an inviting one. The surrounding country consists of a broad, level stretch of arid land. This sagebrush waste, like other parts of Eastern Washington, needs but irrigation, however, to transform it into a garden spot. The soil here is a decomposed volcanic ash which in itself is a great fertilizer, and under the action of water this is the most productive land in the state.

It is the hope of the residents of this section that at no distant date the country immediately surrounding Pasco will be made up of fine farms, well-kept orchards and gardens. The land here can be easily watered by means of artesian wells or from irrigating ditches. Already through the primitive means of irrigation adopted here there has sprung up here and there over the country little oases of fine gardens, the green verdure of which contrasts strangely with the leaden color of the surrounding sagebrush land. All of this land can be redeemed by water, and at a comparatively small expense, as the supply of water here for irrigating purposes is easily obtained, and the supply is inexhaustible.

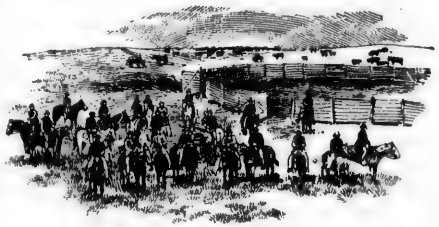
Even the apparent wastes of sagebrush land here possess a value. This land is covered in places with self-curing bunchgrass which retains its nutritious qualities throughout the winter. Cattle turned out on this land feed on the bunchgrass here throughout the year without attention. There are today 15,000 head of stock in Franklin county, and stockraising is the chief industry of the county at the present time.

Ritzville, Washington.—Ritzville, the county seat of Adams, is a thriving ing town of about 500 population. It is located on the main line of the Northern Pacific railroad, 64 miles west of Spokane, the leading city of Eastern Washington.

Ritzville is the banking, trading and shipping point for a large area of agricultural and grazing country that is well settled. The land in the vicinity of the town yields large crops of wheat, barley, rye and oats. In some sections of Adams county horticulture is receiving considerable attention. In the county is still a large amount of unoccupied land which is open to settlement and which can be made highly productive. Farming in this part of the state is successfully carried on without the aid of irrigation. Good water for domestic use is obtained by sinking artesian wells to an average depth of about 80 feet. Much of the land of the county would produce perhaps greatly increased yields if water were carried to it, and as the supply from the artesian wells of this section is inexhaustible there is no reason why the arid portions of the county should not be well watered from this source in the near future.

SCHOOL HOUSE, RITZVILLE.

Ritzville's future growth depends on the settlement of the surrounding rich farming lands. The town at the present time contains a $25,000 brick court house, a handsome school building which cost $13,000, a flouring mill with a daily capacity of 50 barrels and a bank which occupies a substantial brick building in the business center. The place enjoys considerable trade and the solid basis on which the town is built can be appreciated from the statement that this trade is annually increasing in volume.



CATTLE ROUND-UP NEAR SPRAGUE.

Sprague, Washington.—Situated in the southeastern corner of Lincoln county, on the border of the great wheat-producing belt of the Big Bend of the Columbia river, is the prosperous and growing city of Sprague. In addition to being the commercial center and seat of justice of Lincoln county, Sprague is also the headquarters of the

GENERAL VIEW OF SPRAGUE.

HARVESTING NEAR SPRAGUE.

Idaho Division of the main line of the Northern Pacific railroad. At this point the company have established extensive repair and machine shops, round houses and several miles of side-tracks. The payroll of the railroad company at Sprague now amounts to $30,000 a month. All this money is spent at Sprague, thus insuring the merchants a steady and never-failing revenue, and forming an important item in the trade of this important point.

Surrounding Sprague, and tributary to the place, are over 85,000 acres of the now famous wheat fields of the Big Bend country. This land, together with the rich lands of the famous Palouse belt, yield more wheat to the acre than any other grain-producing belt of America. In this country a failure of crops has never been recorded, and since the soil was first tilled in the Big Bend country, the average yield of wheat here has been from 25 to 40 bushels per acre. Nearly all the farmers who occupy the rich agricultural lands in the vicinity of Sprague, are in a prosperous condition, as is evidenced by their comfortable homes, the large granaries, windmills, great barns and other costly improvements noted on their farms. With the large monthly payroll of the railroad company, and with a large trade from one of the richest tributary districts in the Northwest, Sprague's prosperity has been as lasting as it has been substantial, and this has long been considered one of the most promising cities of Eastern Washington.

PHOTO. BY MCINNIS.

LINCOLN COUNTY COURT HOUSE, SPRAGUE

Sprague is inhabited by an enterprising and cultivated people, who have the utmost confidence in the city's future. The town was founded by the Northern Pacific Railroad Company in 1882. In December of the following year, the territorial legislature passed an act creating the new county of Lincoln. Sprague was incorporated and made the county seat. Geo. S. Brooke, who organized the first city government, was elected the first mayor of Sprague and the present incumbent of this office, is a member of the historic Brooke family of Maryland, a family who have been residents of that state since 1650. Mr. Brooke, the subject of this sketch, was born in Dubuque, in 1855, and graduated with honors from Griswold College, Davenport, Iowa in 1872. In 1874 he came to Portland where, during his eight years' residence in the leading city of the Northwest, he was connected with the well-known firm of Allen & Lewis, and for four years he was general passenger agent of the Oregon Railway & Navigation Company. Mr. Brooke came to Sprague in 1882 and established the banking house of Fairweather & Brooke, which continued in business until succeeded by the First National Bank of Sprague in July, 1886. Mr. Brooke became cashier of the latter bank on its organization, and in 1891

PHOTO. BY MCINNIS.

HON. GEO. S. BROOKE, MAYOR, SPRAGUE.

he was elected to the responsible position of president of the bank, an office he still holds. In 1889 the gentleman organized the Sprague Water Company, of which he was elected president. This company has given the people of Sprague an abundant supply of the purest and best water. Mr. Brooke has always taken an active and leading part in the organization of all enterprises tending in any way to the promotion of the best interests of Sprague. He is now serving his fourth term as mayor of the city, having been elected to the office for three times in succession. He has the full confidence of those who know him, and he is one of the most respected citizens of Eastern Washington.

Sprague now claims a population of over 1,500. The city is attractively laid out with broad, graded streets, well kept sidewalks and fine shade trees. The municipal authorities have shown commendable enterprise in following the example of larger centers of population, and the city now owns and operates its own electric light plant, and an extensive water-works system which is of more than ample capacity to supply a much larger population than is now centered here.

The educational facilities of Sprague are superior to those enjoyed by most cities of the same population. In addition to an excellent public school, Sprague possesses a large Catholic seminary and several private schools. Every township of Lincoln county is supplied with a small public school house. Including the schools maintained in the incorporated towns, 112 public schools are maintained in the county. The average daily attendance at these schools is 3,600, and they are liberally supported.

The present excellent condition of the public schools of Lincoln county is due to the efforts of Mr. H. N. Martin, the county superintendent of schools, who has successfully endeavored to employ only experienced teachers. It has been through the efforts of Mr. Martin that a number of new schools in the county have been established. Mr. Martin is a native of Ohio. He attended the Normal School of West Virginia, and subsequently read law and taught school in his native state. In 1890 he came west and located at Sprague, where he was admitted to the bar in 1891. When Mr. Martin was 24 years of age, he was elected county superintendent of schools for Lincoln county, and he is now filling his second term in that important office. In addition to performing the duties of his official position, Mr. Martin also devotes considerable time to attending to his large law practice.

PHOTO. BY MC INNIS.

HON. H. N. MARTIN, SPRAGUE, SCHOOL SUPERINTENDENT, LINCOLN COUNTY.

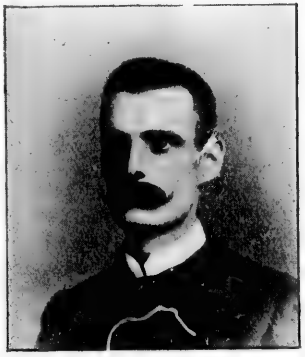
Sprague possesses a well-edited daily newspaper as well as an excellent weekly publication. Established at this point are a brewery, a flour mill with a daily capacity of 150 barrels, and an extensive wood-working establishment. The Lincoln county court house at this point, is a large, commodious brick structure with handsomely appointed offices. The style of architecture of the city, while not imposing, is of the solid, tasty order, and the leading business houses as a rule occupy fine brick buildings of modern design and finish.

The following sketches of public officials of Lincoln county will illustrate the rapid advancement of men of worth and ability to positions of honor and trust in the newly settled sections of the West.

JUDGE WALLACE MOUNT.—The judicial tribunals of Washington are in many instances presided over and adorned by young men whose professional attainments and sterling integrity have received the early and well merited recognition of their fellow citizens. Wallace Mount, judge of the superior court of Lincoln county, was but 30 years of age when he was promoted to the bench. Judge Mount, who is known throughout Washington as an able jurist and an accomplished student, was born in Clackamas county, Oregon, in 1859. After graduating from the University of Oregon in 1883, he commenced the study of law in the offices of Williams, Dedman & Thompson, at Portland, and in 1885 he was admitted to the bar. One year later he removed to Sprague, where he practiced his profession until 1888, when he was elected county attorney. In 1889 he was elected superior judge and was re-elected to the same office in 1892 without opposition.

PHOTO. BY MC INNIS.

JUDGE WALLACE MOUNT, SPRAGUE.



HON. JAMES B. GRAY, SPRAGUE.

JAMES B. GRAY.—A splendid illustration of what a man may accomplish in a few years in Lincoln county is shown by the successful career of James B. Gray, the clerk of the superior court. Mr. Gray left his birthplace in Dubuque county, Iowa, in 1878, and after 10 years of business experience in California and Illinois, he finally arrived at Tacoma in 1888, with but $100 in his possession. From Tacoma Mr. Gray went to Waterville, in Douglas county, where for one year he was engaged in the land business. He then removed to Davenport, in Lincoln county, where for four years he managed the mortgage loan business of Mr. C. C. May, the well-known banker. From time to time Mr. Gray invested small sums of money in property situated near Davenport, and the rapid increase in the value of this realty has netted him over $30,000 in the past four years. Mr. Gray was elected clerk of the superior court of Lincoln county in the fall election of 1892.

PHOTO. BY MC INNIS.

HON. T. P. DONAHUE, SPRAGUE, SHERIFF LINCOLN COUNTY

T. P. DONAHUE.—Mr. T. P. Donahue, who for

many years was known to the traveling public as one of the most genial and courteous passenger conductors on the lines of the International and Great Northern railroad in Texas and the Northern Pacific in Washington, is now the sheriff of Lincoln county. Mr. Donahue was born in Northfield, Washington county, Vermont. He removed from the place of his birth at an early age to Indiana. On attaining his majority he moved to California and subsequently to Texas. In 1882 Mr. Donahue arrived in Spokane, where he was immediately appointed passenger conductor on the Northern Pacific. Four years later he resigned this position and settled at Davenport, where he was engaged in buying grain. Without solicitation on his part, Mr. Donahue received the nomination for sheriff, to which office he was elected by an overwhelming majority in 1893.

Cheney, Washington.—Cheney, the gateway to the broad wheat fields of the famous Big Bend country of the Columbia river, is located on the main line of the Northern Pacific railroad, 16 miles west of Spokane. It is also the terminus of the Central Washington branch of the same road. This latter line runs west from Cheney for a distance of 108 miles, through the heart of the Big Bend country, terminating at Coulee City.

Cheney contains today a population of about 1,000. It is attractively situated on a rolling plain, and is surrounded by a fringe of timber. Its broad and well improved streets are lined with a substantial class of buildings. Among the fine structures of the town are the handsome and costly brick structure occupied by the First National Bank of Cheney, the building of the Bank of Cheney, and the Cheney hotel. The two banks of Cheney rank among the solid financial institutions of the state. They have a paid-up capital of $50,000 each. The hotel at Cheney would be an ornament to a town of much larger population. The State Normal School, which now occupies a fine building at Cheney is permanently located at this point. Among the industrial plants of Cheney are several wood-working establishments and a flouring mill with a capacity of 80 barrels a day. A large brickyard in the vicinity of the town turns out several hundred thousand brick a year. The enterprise of the citizens of Cheney is shown by the fine water-works system here. This plant cost $50,000. It is connected with a reservoir that has a holding capacity of 400,000 gallons. Cheney is well lighted by electricity supplied by a complete plant equipped at a cost of $20,000.

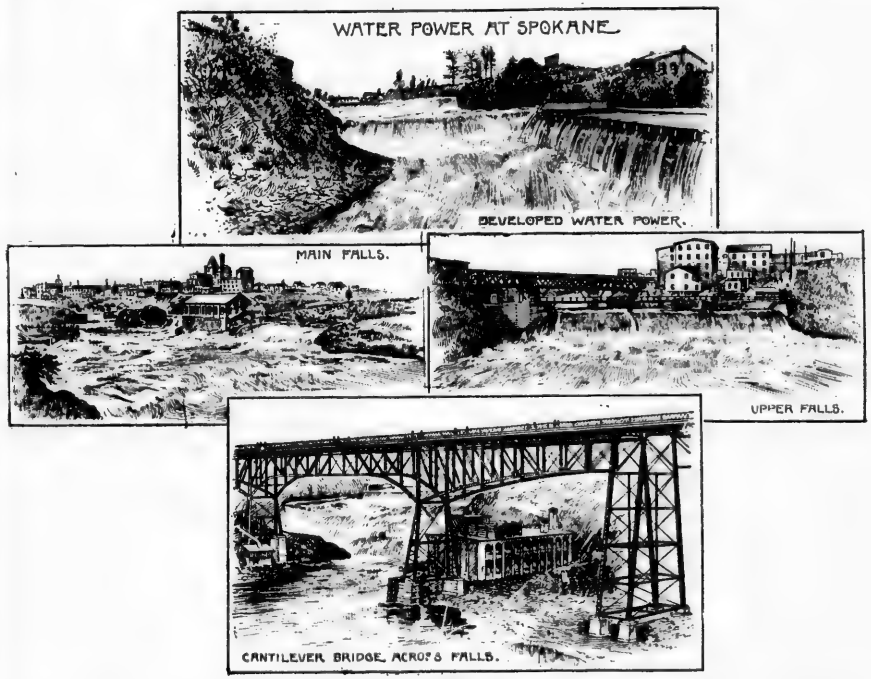
The merchants of Cheney do a large business with the adjacent farming country, which is justly called the garden spot of Washington. Ten miles west of Cheney is Medical Lake, one of the most remarkable bodies of water on the continent, and which is fully described in a subsequent article. But seven miles east of Cheney is the edge of the famous Palouse country, one of the great wheat-producing sections of the world. With its advantageous location, Cheney will always remain one of the prosperous inland towns of the state of Washington.

The man who has built up Cheney is Hon. D. F. Percival, the head of the two banks here, the mayor of the town, and the owner of large tracts of valuable land in the immediate vicinity. Mr. Percival has repeatedly been honored with public office by his fellow-citizens, and he is today one of the most respected residents of Eastern Washington.

Spokane, Washington.—Situated near the eastern border of the great basin of the Columbia river is the important city of Spokane, the inland metropolis

of the Pacific Northwest, and one of the most enterprising centers of population on the coast. The commanding location of this city, and the remarkable diversity of the resources of its 60,000 square miles of tributary country, have made it a place of metropolitan importance, with distinctive features of its own possessed by no other city in the West.

The early history of Spokane, unlike that of most Western cities, is devoid of sensational events. It is but the story of the struggles, hopes and disappointments of a score or more of intrepid pioneers. Among this number were a few discerning



men who came to the present site of the city firm in the belief that the completion of the Northern Pacific railroad across the continent would witness a rush of immigration to the fertile sections of Eastern Washington that would rapidly increase the population and importance of the then territory. These men also saw that with the great water power afforded by the falls of the Spokane river, and with its favorable location for holding the trade of a vast tributary basin, Spokane would become, in time, one of the leading centers of population of Eastern Washington. Spokane was already destined to be a city before the townsite was platted, and the growth of this place during the past decade is a tribute to the spirit of the West which stops at nothing when there is anything to be accomplished by effort, and to the people of Spokane, who have never lost hope in the future of their city.

The expectations of the early settlers on the present site of Spokane have been more than realized. The broad, rolling plains of the Big Bend and Palouse sections are now dotted with the homes of thousands of prosperous farmers, the rugged mountain ranges of the Cœur d'Alene, Kootenay, Colville and Okanogon mining districts now annually add millions of dollars of wealth to the coffers of the nation, the broad stretches of grazing land in the fertile country west of Spokane now support thousands of head of cattle, horses and sheep, and all of this rich tributary belt to this city is now tapped by as complete a system of railroads as has been perfected in any part of the coast. Spokane's population, in 1870, was 100 or more. Spokane, today, is a magnificent city of 35,000 people. This is the history of Spokane's rise from obscurity to wealth and importance, and it is a chronicle of events that has marked an epoch in Western city building.

The famous military highway known as the Mullan road, connecting Fort Walla Walla on the west with Fort Benton, at the head of navigation on the Missouri, on the east, passed within a short distance of the present site of Spokane. This great thoroughfare between the years 1860 and 1881 was the only highway for travel between Montana and Washington and Oregon. Of the thousands of pioneers who journeyed over the Mullan road, many tarried to admire the wild rapids and mighty falls of the Spokane river. A few of these adventurous spirits, impressed with the romantic beauty of the falls and possessing a vague idea that the surging and foaming waters might at some distant date in the future be utilized for manufacturing purposes, ended their journey here. The earliest of these settlers on the present site of Spokane were Benjamin Downing and Wm. Scranton. In 1873 J. N. Glover purchased the claims of the settlers who had preceded him here. Mr. Glover paid in all the sum of $4,000 for the site which Spokane now occupies. In the following year H. T. Crowley came to the settlement and established here an Indian mission school, many years before the Jesuit Fathers had founded a mission near the point where the Cœur d'Alene river empties into the lake of the same name. The "Old Mission" established by Father Joset in 1846 is still standing in a good state of preservation. In addition to the natural beauty of its surroundings and the sacredness which religion bestows on the spot, there are other stirring events in the history of the "Old Mission" which make the site especially cherished in the minds of all old settlers in the Northwest. Beneath its moss-covered roof have rested Generals Sherman and Sheridan and Isaac Stevens, Washington's pioneer governor. The priests of the mission labored long and earnestly for the moral and material advancement of the Indians of Eastern Washington. In spite, however of the pacific advice of the "blackgowns," as the reverend fathers were called, the tribes of the Spokane, Pend d'Oreille, Palouse and Cœur d'Alene Indians banded together in a mighty confederation for the repulse of the gold-seekers and other settlers who were invading their domains. A detachment of United States soldiers under the command of Colonel Steptoe, was sent to quell the outbreak. The Indians learned of this move and, with the cunning of their race, prepared an ambuscade into which the unsuspecting troops rode to their death. This fight occurred on the 16th day of May, 1858, and the scene of action was on the Snake river in what is now the best settled portion of Eastern Washington.

LOON LAKE, NEAR SPOKANE.

After this first repulse the Government commenced an active campaign against the hostiles under the direction of Colonel George Wright. On the 1st of Septem-

ber, Colonel Wright engaged the savages in battle at Medical Lake, and completely routed them without the loss of a single soldier. Six days later the troops again encountered the Indians and, in a fight which lasted seven hours, drove them a distance of 14 miles. This decisive victory ended the war and a few weeks later the warriors came in from the hills to which they had taken flight and gave tokens of perpetual peace. The leading instigators of the war were summarily executed on the banks of a pretty little brook within the present city limits of Spokane. It was from this incident that the stream received the gruesome name of Hangman creek.

PHOTO. BY MAXWELL.

RIVERSIDE AVENUE, SPOKANE.

It was at the "Old Mission" that Colonel Wright made his terms with the Indians after he had conquered the confederated tribes. Father Joset, in charge of the mission, had endeavored to prevent the Cœur d'Alenes from taking part in the threatened war. The reverend father succeeded in quieting the tribe, and he then started for Vancouver Barracks, Washington, to confer with the general in charge of the troops there. During his absence the Cœur d'Alenes, free from his restraining influence donned their war paint and joined the hostiles. It was at a later period than this, however, that the unselfish work of the Catholic priest bore fruit. In 1877 the Nez Perces Indians made war on the whites. In all the towns and settlements of the Palouse country and at the little hamlet of Spokane Falls consternation took the place of the peace and happiness among the inhabitants. During the height of the excitement it was rumored that the Cœur d'Alene Indians had taken the warpath. It is hard for any one who has never lived in a small outpost of civilization surrounded by hostile savages to realize the consternation that a rumor of this kind carried with it. There arose before the pioneers of Eastern Washington at that time visions of torture by fire, slaughtered infants and outraged womanhood. Of all fiendish cruelty, that concocted in the brain of the blood-thirsty savage is the worst. The excitement subsided, however, when it was learned definitely that the Cœur d'Alene Indians would not take the warpath. After careful consultation they had decided to remain true to the teachings of the Jesuit Fathers. Under the guidance of these missionaries they have since advanced rapidly towards civilization and they are today the most enlightened and prosperous tribe of Indians in Eastern Washington. They occupy a reservation on the beautiful shores of Lake Cœur d'Alene. They have finely cultivated farms, fine wagons, stock, and even carriages and good houses. Old Chief Saltice, the leader of the tribe during the troublesome

PHOTO. BY MAXWELL.

BUSINESS CENTER, SPOKANE.

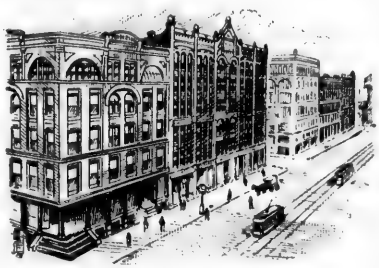
STREET SCENE, SPOKANE.

times of 1877, is now frequently seen walking the streets of Spokane in as dignified and quiet a manner as any law-abiding citizen, He dresses in good taste. He is a man of both ability and wealth and the confidence reposed in him by his own people is no greater than is the respect which is shown him by his pale-faced brother.

The Indian outbreak of 1877, and the great conflagration of 1889 were the exciting periods of Spokane's existence. Spokane's advancement has been as steady as it has been free from disturbances of the public peace, and it has always enjoyed the distinction of being one of the best governed cities of the West.

In 1878, General Sherman with an escort of cavalry made the journey from Walla Walla to Spokane. At the earnest solicitation of the few inhabitants of the village at that time, he established a military post on Cœur d'Alene lake, near the point where the Spokane river leaves this great body of water. This post is now known as Fort Sherman. In the same year another important event was recorded in Spokane's history. In that year Messrs. A. M. Cannon and J. J. Browne, the leaders in Spokane's subsequent prosperity, purchased a one-half interest in the townsite here, owned at that time by J. N. Glover. It is to the energy and public spirit of these three pioneers, all now prominent bankers of that city, that Spokane owes much of its present greatness, and it is these men who perhaps today stand the highest in the confidence of the people of this flourishing city.

PHOTO. BY MAXWELL.



RIVERSIDE AVENUE, SPOKANE.

Until 1880 Spokane's growth was slow. In that year the place did not contain to exceed 200 people. An impetus was given to the growth of the place however by the reorganization of the Northern Pacific Railroad Company, and the promised early completion of their line to Spokane. In 1881 the first cars over this road reached Spokane from Wallula Junction, but it was not until the summer of 1883 that the road was completed to a transcontinental connection. From the time of the completion of the Northern Pacific, the growth of Spokane was phenomenal. In 1885 the town contained 3000 people. A careful census made in June, 1887, gave the city a population of 7,000. Two years later, based on a showing made in the city directory, Spokane contained a population of 22,000. The city directory of 1893 contained 13,267 names. Basing the population at that time on a ratio of two and one-half people in the community for each name in the directory, and this is recognized as a most conservative estimate, Spokane contained a population in 1893 of 33,167.

PHOTO. BY BAILEY.

RIVERSIDE AVENUE, SPOKANE.

A potent factor in the growth of Spokane was the discovery of enormous deposits of lead and silver ores in the Cœur d'Alene mountains in what is so well

known to the world as the Cœur d'Alene mining district. The development of the rich mines in this district was of the greatest importance to Spokane. The city at once became the principal source of supply for these mines and it was at Spokane that the main travel from the Northern and Union Pacific diverged for the mining district. The people who made fortunes in the mines, built themselves palatial homes in Spokane. They invested largely in property there, and it was Spokane which profited most by the development of the mining district. From the advertisement received through the opening of this mining belt thousands of people journeyed across the continent to cast their fortunes with those of Spokane. The surplus population of the city poured into the rich agricultural districts of the Big Bend and Palouse countries, all tributary to Spokane and the settlement of these rich lands made this part of Eastern Washington one of the best tilled sections of the West.

A Business Block, Spokane.

In the Palouse and Big Bend sections were thousands of acres of virgin soil ready for the plow. The soil on all this land is deep and it produces enormous crops of all kinds of cereals as well as being especially adapted to fruit culture. From these lands are now annually harvested 20,000,000 bushels of grain. Even with this showing the country as yet is but partially settled and there is enough unoccupied land here today to furnish homes for thousands of families, in a country where crops never fail and where the climate is without extremes of either intense cold or torrid heat.

The mineral resources of the country tributary to Spokane are but partially developed. In the articles on the Cœur d'Alene, Colville, Kootenay and other mining districts appearing in other parts of "The Handbook" will be found interesting statistics of the mineral wealth of these sections. These districts comprise the best part of Western mineral belts, and they contain today the largest deposits of galena-silver-bearing ore in the world. Another source of wealth to Spokane is the vast forests of Eastern Washington, which are yet standing in their virgin state. It is estimated by competent lumbermen who have examined into the subject that the forests of Eastern Washington contain no less than 50,000,000,000 feet of standing timber, a source of wealth that will some day support a great industry in this section.

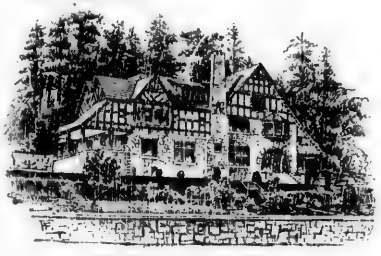
Auditorium, Spokane.

North of Spokane and extending nearly to the international boundary line is the fertile Colville valley. The 90,000 acres of meadow land in this valley are capable of producing annually 225,000 tons of hay. In addition to this the adjacent bunchgrass lands yield bountiful crops of cereals, fruits and vegetables. In the hills lining the valley are developed and dividend-paying mines. In these hills are also large deposits of the most durable of building stone. The mining districts of which Spokane is the trading center annually produce about $10,000,000 in wealth. In the Cœur d'Alene district alone when the mines are all being operated, the payroll aggregates $3,000,000 per annum.

One of the most important districts tributary to Spokane is the Okanogan country. This lies far to the north of the city and is rich in both gold and silver

deposits. This district commences at Lake Chelan, the most beautiful of American lakes, and extends to the mighty glaciers of the Cascade Mountains. It contains a number of flourishing towns, and its deposits of mineral wealth are inexhaustible. Lying northeast of the Okanogan country, in British Columbia, is West Kootenay with its romantic Alpine lake, along the shores of which are great ledges of high-grade galena ore. From its surface-showing, West Kootenay is the richest silver district in the world. The district also contains heavy deposits of gold-bearing quartz, a large part of which is free milling, and great beds of gold-bearing gravel from which thousands of ounces of the yellow metal have already been washed. It is something of an anomaly that nearly all the inhabitants of West Kootenay situated in the British possessions are American citizens. Most of these men started for the mines from Spokane, and most of the money they make in the diggings is spent in Spokane. The city is the supply center for most of this vast mineral district to the north, the trade with which amounts to thousands of dollars annually.

PHOTO. BY MAXWELL.



A SPOKANE RESIDENCE.

It is worthy of note in this connection that no rival city shares with Spokane the trade of this vast district. Tacoma and Seattle, to the west of the Cascade range of mountains on the shores of Puget Sound, are the nearest cities of any size west of Spokane, while to the east the nearest populated centers of any commercial importance are Helena and Butte, distant about 380 miles.

On a quiet Sunday evening, August 4, 1889, occurred the great fire, which in less than two hours destroyed the entire business district of Spokane. This holocaust wiped out of existence 450 buildings and it entailed a direct loss of $5,000,000. The insurance on the property of the burned district amounted to $2,600,000. The spirit of Spokane's people was shown by their action before the embers of the great fire had cooled. The work of clearing away the debris was at once commenced by the property owners, and in less than one year after the destruction of the city a grander one had risen on the ashes of the burned district. The public and private improvements made during this time of recuperation were on the most handsome scale. Business blocks were erected that had no superiors in the largest cities of the continent. The rich men built palatial homes and the structures put up for the accomodation of public business would be the pride of any city on the continent. There are homes in Spokane today that represent the expenditure of amounts ranging all the way from $25,000 to $150,000 each, and the business district is as compactly and as handsomely built as are any of the best streets of Chicago.

Spokane is today one of the most attractive of Western cities. It is symmetrically laid out and contains many beautifully arranged parks and public squares. The streets in the residence portion of the city are 75 feet wide, while the business thoroughfares are 100 feet wide, with 16-foot sidewalks. Looking down Riverside avenue, in the city, the eye beholds an imposing array of five and seven-story buildings constructed of granite and pressed brick. The Granite block, the Spokane National Bank's one-story $90,000 Grecian building, constructed of Tennessee mar-

ble, the Rookery, Hyde, Jamison, Eagle, Traders, Voegler, First National Bank and other buildings on this street, are monuments of architectural art. At the end of Riverside Avenue is *The Review* building occupied by Spokane's ably edited and well-managed morning paper. This stately edifice is seven stories in height and is surmounted by an artistic tower or front which rises heavenward for five additional stories. *The Review* building is a distinguishing landmark in Spokane for miles distant, and it is one of the great newspaper buildings of the West.

REVIEW BUILDING, SPOKANE.

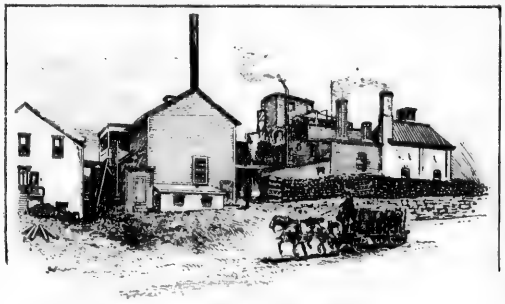
Sprague, Main, Front and First are business streets which run parallel to Riverside Avenue. These streets are lined with imposing buildings. Of the intersecting streets, Howard, Stevens and Monroe are compactly built up with business blocks that are not inferior to those which line the other main streets of the city.

In the center of Spokane are the mighty falls and picturesque cascades of the Spokane river. This swift-flowing stream is the outlet of the Cœur d'Alene Lake. In its course to the Columbia it winds through long stretches of level prairie land, plunging down the rocky inclines of narrow canyons and great ravines. Along its course are many charming views of landscape scenery. Twenty-five miles above Spokane the river has a fall of 42 feet. Around this fall the flourishing little town of Post Falls, Idaho, has sprung up. At Spokane the river falls, in a distance of about one-half mile, 130 feet. This is divided into two main falls. The fall at the upper cataract is 60 feet while the lower one has a fall of 70 feet. It is to the great power afforded by these falls that Spokane owes its birth. The development of this power has been a most potent factor in the growth of the city, and were this entire power utilized for manufacturing purposes which it must be some day, Spokane would easily be a city of 200,000 population. The amount of water power now available within the city limits of Spokane, at extreme low water, is 30,000 horse. Of this vast power 20,000 horse is controlled by the Washington Water Power Company, and 10,000 horse by the Spokane Water Power Company. Of the great power here but 3,500 horse is now in use. The falls of the Spokane river, at Spokane, furnish one of the greatest water powers in America.

MIDDLE CHANNEL, POST FALLS, SPOKANE RIVER.

The power of the falls here is easily controlled. The river is entirely free from ice in winter, improvements are easily made at the falls, and the river-bed being of basaltic-rock formation is not subject to abrasion, as is the case in other great falls of the continent. The magnitude of the power afforded by the falls at Spokane can be appreciated when it is stated that the famous St. Anthony falls, at Minneapolis, furnish 10,000 horse-power less than is furnished by the river at

Spokane. At the foot of the lower fall at Spokane, on the property of the Washington Water Power Company, is the large $200,000 plant of the Edison Electric Illuminating Company. This is one of the greatest water-power stations for the generation of electricity in the world. From a dam 500 feet distant, water is delivered through two steel penstocks, each seven feet in diameter, to the first floor of the station here, which is 70 feet below the level of the dam. On this floor is one of the best hydraulic equipments in the Union. Here are located 12 pairs of wheels, 6 being used in each penstock. The dynamos are arranged on the second floor, and are driven by a system of direct and almost perpendicular belting. Electricity is transmitted from this plant to all parts of Spokane. It is used here for a large variety of purposes. Perhaps no other city in the world uses electricity for so many purposes as does Spokane. Every printing press in the city, an extensive brewery, with a capacity of 450 barrels per day, numerous passenger elevators, electric stoves and fans, sawmills, wood saws, several manufacturing plants, and all the street cars here are run by electric power. The Edison plant also lights the city, 550 arc and 10,000 incandescent lamps being used.



N. Y. Brewery, Rudolph Gorkow, Spokane.

The cheapness at which this power is supplied and its easy adaptability to all purposes for which power is required, is a most important factor in the economical operation of machinery in Spokane. It minimizes the cost of manufacturing at this point, and as the city progresses, and as the adjacent country becomes more developed it should be the means of encouraging the establishment of many industrial plants at this point.

The water power at Spokane now turns the wheels of three large flouring mills, with a combined daily capacity of 1,900 barrels. There are also four iron-working plants and several wood-working establishments which are run by this same power. Of the vast power lying idle here, there is now 10,000-horse power developed to a point where it is available for use at a moment's notice. The cheapness of this power can be appreciated when it is stated that a barrel of flour can be made in Spokane for a fraction of over 1 cent. A horse power sold here for $10 per annum, will grind, in a year, 900 barrels of flour. In manufacturing flour by steam, the cost of fuel alone is 7 cents a barrel. In every line of manufacturing a proportionate saving is made by the mills using water power at Spokane over the cost of operating the same mills elsewhere by steam.

Second Congregational Church, Spokane.

Aside from their commercial value, the falls at Spokane possess every scenic beauty. They have been admired by thousands of tourists with wonder and admiration. The Spokane river, in its course through the city of the same name, is divided

by rocky islands into five separate channels. Where it is first divided it plunges wildly downward forming a series of rapids below. Here it tumbles over the rocks in a series of beautiful falls. After uniting, the water makes a final plunge of 70 feet. Spanning nearly the center of this last great fall is the Monroe-street steel cantilever bridge. From the surface of this bridge is obtained a most delightful view of the seething waters below. The water here first flows over the apron of a dam, and then dashes down a precipitous and rocky incline, finally falling into a deep basin where it is constantly churned to foam. This boiling caldron of white, with its rainbow-tinted spray and the green waters beyond it, forms one of the most enchanting of views.

The extensive and admirably equipped rapid-transit system of Spokane is operated by 500 horse power, furnished by the Edison station. The street-car facilities of Spokane are equal, if not superior, to those of any city of the same size in the world. A network of street-railway tracks reaches out in all directions from the business center. These lines connect with the most remote of the outlying suburbs. The system consists of 41 miles of electric lines, 3 miles of cable road, 2 miles of motor track, and 65 cars of the most modern equipment.

The Spokane Cable Railway ascends Monroe street to a bluff 300 feet high lying in the southern part of the city. The slope at the top of the bluff is covered with elegant residences which cost all the way from $10,000 to $80,000 each. These fine homes, together with the fine business blocks in the heart of the city, prove conclusively that the men who made their money in Spokane did not seek outside points for investments, but showed their faith in their home city by putting their money back in the place where they had made it. The Spokane & Montrose Railway Company, with a capital stock of $50,000, operates an electric line 3¼ miles in length, running from Riverside avenue to Cook's Addition and Montrose Park. Both of these addition are dotted with costly homes and are beautiful tracts of land occupying the highlands south of the business center of the city. The City Park Transit Company, capitalized for $250,000, operates seven miles of electric road. The cars of this company run to Ledgerwood Park, one of Spokane's most attractive suburbs.

BRYANT SCHOOL, SPOKANE.

Spokane's most important suburb is the town of Hillyard, where are located the extensive shops of the Great Northern railroad. There are 300 men employed in the shops at Hillyard. It is reached by an electric street railway. The townsite is under the sole control of Messrs. Carrittee & Grinnell, a prominent Spokane real estate, loan and investment firm. This firm will cheerfully answer inquiries about Hillyard. It also makes a specialty of attending to business for non-residents and has a large clientage throughout the United States.

Ross Park, a residence suburb occupying a romantic position near the river and three miles distant from Riverside avenue, is reached by the cars of the Ross Park Electric Railway Company. This company has a capital stock of $125,000, and it operates nine miles of electric road. The Arlington Heights Motor Railway Company, with a capital of $50,000, operates an electric line two miles in length. The Spokane Street Railway Company's system is the largest in the city. This company has a trackage of 22 miles through the business streets and residence portions of the city. It is operated entirely by electricity. The capital stock of the company is

$500,000. One of the lines operated by this company runs to the suburban town of Hillyard. It is at this point that the Great Northern Railroad Company has established extensive shops. The Washington Water Power Company, in addition to owning 20,000 of the available 30,000 horse power afforded by the falls of the river at this point, also controls the Edison Electric Illuminating Company, the Spokane Street Railway Company, the Spokane Cable Railway Company, the Spokane Electric Railway Company, the Ross Park Street Railway Company and the Arlington Heights Motor Company.

In journeying to Spokane and other points in Eastern Washington the early settlers traveled over the Mullan road in canvas-covered wagons or on the backs of cayuse ponies. A remarkable change in reaching Spokane has been effected since the first vanguard of civilization invaded its precincts. The "prairie schooner" is now a reminiscence. The great Mullan road with its historic traditions is now broken into romantic country highways connecting towns and villages. The long line of ox teams that once daily left Spokane laden with merchandise are now things of the past. Important lines of railroad now radiate from Spokane in all directions, and but few parts of the accessible tributary territory are today without the benefit of direct rail connection with all parts of the United States.

N. P. R. R. STATION, SPOKANE.

The important trunk lines now reaching Spokane are the Northern Pacific, Union Pacific and Great Northern. Recognizing the importance of Spokane as a natural distributing center, the Northern Pacific has built several important branch lines into the surrounding country from this city. These lines are the Spokane & Palouse, which runs southeast from Spokane to Juliaetta, Idaho, 123 miles distant; the Central Washington, running from Spokane to Coulee City, in the Big Bend country, a distance of 125 miles; the Spokane & Idaho, which connects Spokane with the famous Cœur d'Alene mining belt; the Seattle, Lake Shore & Eastern, which runs west from Spokane to Davenport, in the heart of the Big Bend country, 50 miles distant. The Spokane & Palouse branch extends through the celebrated Palouse country, one of the finest wheat-growing sections of the West. In Whitman county alone, through which this road runs, there are 701,261 acres of improved land and taxable property, which is assessed at $19,500,000. Of the 123 miles of this branch 115 miles extends through a succession of almost unbroken wheat fields. The remarkable fertility of the soil of this part of Washington is attested by the average yield of 30 bushels of wheat to the acre in 1893. From the Palouse country Spokane derives much of its jobbing trade. The Central Washington branch of the Northern Pacific runs through the heart of the great wheat-producing section of the Big Bend country. From Coulee City, the western terminus of this road, stages run to the rich mining districts of the Okanogan. Part of the route between Spokane and the Cœur d'Alene mines, by way of the Northern Pacific, is made by boat on Lake Cœur d'Alene, a beautiful mountain-walled body of water 60 miles in length. The Cœur d'Alene mines are also reached from Spokane by a branch of the Union Pacific which makes direct all-rail connection. The Seattle, Lake Shore & Eastern, operated by the Northern Pacific, is the direct route from Spokane to Davenport, in the center of the Big Bend country.

A line of railroad that has opened up a vast area of country tributary to Spokane

is the Spokane & Northern. This road runs north from Spokane through the fertile Colville valley to Fort Sheperd, an old Hudson's Bay Company's post, situated immediately north of the international boundary line. From Fort Sheperd the road continues to Nelson on Kootenay Lake, under the name of the Nelson & Fort Sheperd railroad. At the American town of Northport the Spokane & Northern now makes daily connection with the line of boats running on the Columbia river and through the Arrow Lakes to Ravelstoke, a station on the Canadian Pacific railway. This steamboat service and its connections practically gives Spokane a fourth transcontinental line. It is but a question of time when the Canadian Pacific will run its cars direct to Spokane. This company is now building a branch line to the Slocan Mining District near Kootenay Lake. This branch will eventually reach Nelson, connecting there with the Nelson & Fort Sheperd railroad.

FRANKLIN SCHOOL, SPOKANE

The Union Pacific reached Spokane in 1890, and in the summer of 1893, the Great Northern railroad commenced running its trains into the city. Spokane is today one of the largest and most important railroad centers west of the Rocky Mountains. Owing to its extensive system of railroads, with its favorable geographical location, making it the common distributing center for 60,000 square miles of territory, Spokane is now an important jobbing center, whose trade aggregates millions of dollars annually. With the advent of the Great Northern to Spokane, there came a readjustment of freight rates on the transcontinental lines reaching this point, which has been of the most signal benefit to the jobbing trade of the city. These concessions placed Spokane, so far as railroad rates were concerned, on an equality with the large terminal cities of the West.

BANCROFT SCHOOL, SPOKANE.

Like nearly all the large cities of the continent, Spokane did not escape the effects of the disastrous business panic of 1893. Owing to a lack of confidence shown by depositors, several banks at this point were compelled to temporarily close their doors. The assets of these suspended banks were all however, far in excess of their liabilities. Most of them have now resumed, and it is a safe assertion that all the banks which had trouble here will either resume business or liquidate in full. The banks of Spokane with their capital, surplus and undivided profits are as follows: Browne National, capital, $100,000, undivided profits, $35,000; Old National, capital, $250,000; Traders National, capital, $200,000, surplus and undivided profits, $100,000; Exchange National, capital, $250,000, surplus and undivided profits, $45,000; Washington National, capital, $250,000; A. M. Murphy Co., [private bankers], capital, $25,000; First National, capital, $250,000, surplus and undivided profits, $52,000; Citizens National, capital, $150 000; Bank of Spokane Falls, capital, $150,000, surplus, $125,000; Commercial Savings, capital, $50,000; Spokane Savings, capital, $100,000, surplus, $32,000; Washington Savings, capital, $50,000.

Of the prominent citizens of Spokane, none have been more actively identified with the welfare of the city than L. C. Dillman. No public enterprise which has benefitted Spokane has ever been undertaken without the material aid of this gentleman. Mr. Dillman is the senior member of one of the most prominent real estate

L. C. DILLMAN, SPOKANE.

and investment broker firms of the city. He is a director in the Washington National bank, president of the Pacific Bullion Mining Company, director in the Spokane Hydraulic Mining Company, and general manager and treasurer of the St. Paul Land and Improvement Company, a corporation owning large tracts of land in the city and in Eastern Washington.

Mr. Dillman is a native of Louisville, Kentucky, and is now 38 years of age. He has donated without any compensation, valuable tracts upon which to locate industrial plants. The aggregate value of these donations is not less than $75,000. He has an extensive acquaintance with prominent capitalists throughout the United States, and is the accredited representative of interests aggregating in value, $3,000,000.

The school census of 1893 showed that there are now 4,610 white children between the ages of five and twenty-one years in Spokane. Of this number, 3,280 pupils are now enrolled in the public schools of the city.

The first building occupied for school purposes was a small frame structure erected in 1878. The demands of the city soon called for larger school quarters, and several frame and brick school houses were erected here a few years later. Then came the great fire of 1889. In rebuilding the city the old frame structures were supplanted by massive modern school buildings of handsome architectural design. The citizens of the city, from the time of the establishment of the first school here, have made every effort to improve the educational system of Spokane. There are now 10 large and handsome brick and stone public school buildings in the city. These buildings are artistic monuments to a progressive and intellectual community. An observing writer has said that the typical American is found in the West, and that in no other section of the Union are American institutions more cherished. It is doubtless true that in no other sections do parents more earnestly desire the education of their children. The percentage of illiteracy is less in the Pacific Northwest than in any other section of country of equal size in the world.

LINCOLN SCHOOL, SPOKANE.

The public school property of Spokane consists of realty valued at $188,000, and improvements that have cost $336,500. The cost of the different schools of the city, exclusive of the grounds they occupy, is as follows: High school, $150,000; Irving, $30,000; Bryant, $30,000; Bancroft, $29,000; Franklin, $30,000; Lincoln, $25,000; Edison, $30.000; Longfellow, $7,500; Emerson, $3,000; Lakeview, $2,000.

The high school, with its artistic clock tower, occupies the center of a large square, the grounds of which are tastefully arranged in walks and flower beds. It is finished throughout in oak, and it contains, in addition to a number of large, well-lighted classrooms, a laboratory, library, gymnasium, and an assembly hall, with 500 opera chairs. Sixty-four teachers are employed in the public schools here. Of the excellent private educational institutions in Spokane, the most prominent are the

Jenkins University, the Spokane College, the Gonnaga College, conducted by Jesuit Fathers, a Catholic seminary, and a business college.

HIGH SCHOOL, SPOKANE.

In 1880 a missionary journeyed overland to Spokane and induced the citizens here to subscribe to a fund for the erection of a church. Since the establishment of this pioneer house of worship, the churches of Spokane have rapidly multiplied, until there are now 43 religious organizations in the city.

Among the notable public buildings in Spokane is a city hall. This is a handsome building, constructed of pressed brick and granite at a cost of $100,000. It is finished entirely in oak. The court house, now nearing completion here, will cost, when completed, about $200,000.

The Spokane bar is held in high estimation throughout the country. It numbers among its members brilliant and eloquent orators, accomplished students and trained counsellors versed in the intricacies of the law. The fame of the most talented of these gentlemen is not confined to Spokane and its judicial tribunals, but extends to and beyond the borders of the Spokane bar. Samuel C. Hyde is a distinguished member of the Spokane bar. As farmer, soldier and lawyer, his career has been a long and honorable one. His intellectual attainments, striking individuality and legal triumphs have won for him a position in the foremost ranks of Washington lawyers.

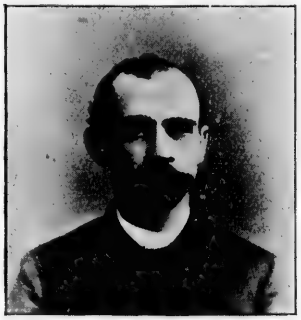
PHOTO. BY MAXWELL.

HON. S. C. HYDE SPOKANE.

Mr. Hyde was born April 22, 1842, in the old historic town of Fort Ticonderoga, New York. At an early age he removed with his parents to a then remote wilderness near Oshkosh, Wisconsin. It was here he grew to manhood, at work clearing the dense forests that surrounded his father's house. The war broke out, and Mr. Hyde went to the front, where he served as a private soldier in the 17th regiment of Wisconsin volunteer infantry. He subsequently graduated from the law school of the Iowa State University. He practiced his profession at Rock Rapids, Iowa, for seven years, then removed to Puget Sound, and in 1879 arrived at Spokane. In 1880 Mr. Hyde was elected prosecuting attorney for the northeast district of Washington, and was re-elected for three consecutive terms. He is now in active practice at the bar.

Of the successful lawyers and brilliant orators of Washington, no one is better known than Thomas C. Griffitts.

PHOTO. BY MAXWELL.

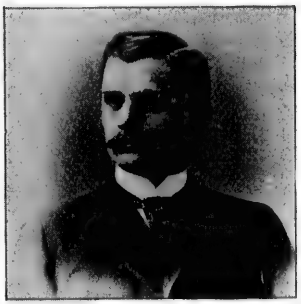


HON. T. C. GRIFFITTS, SPOKANE

Born in Carthage, Ill., December 5, 1857, he grew up in the sterling society of that part of Illinois which Lincoln and Douglass were, in the early part of his life, making their battle-ground. As a member of the constitutional convention of Washington, as vice-president of the National Association of Democratic Clubs for the state and as Washington's first democratic candidate for Congress, Mr. Griffitts became widely known. In order that he might more assiduously prosecute his profession, he retired from politics. Although not a criminal lawyer, he possesses the remarkable record of having defended and secured the acquittal of 22 men accused of murder in the first degree. He is now engaged in attending to his large practice.

The enterprise of the city and its progress are reflected in the advancement of its citizens, and for this reason biographical sketches are in a measure an indication of what integrity and ability can accomplish in certain communities.

Among the young men of Spokane who have been honored by their fellow citizens is Arthur D. Jones, councilman from the fifth ward. Mr. Jones was born in Cass county, Michigan, in 1859. At the age of 11 years he removed to Iowa and later he attended the Iowa State University. After completing his education he taught school in Minnesota for two years when he removed to Chicago, where for five years he occupied a responsible position in the employ of *The Chicago Daily News*. Mr. Jones on account of ill health, removed to Spokane in 1887. In 1891 he was elected Alderman and in 1892 was re-elected to the same position. He is now the senior member of the prominent real estate and insurance firm of A. D. Jones & Co.



ARTHUR D. JONES, ESQ., SPOKANE.

Since the great conflagration of 1889, Spokane has maintained a paid fire department which in point of discipline and efficiency now ranks with the best fire departments in the Union. The Spokane Fire Department's property is valued at $90,000. The force consists of 45 officers and men. The apparatus is classified as follows: three engines, two hose carriages, two hose wagons, two chemical engines, one ærial truck and a hook and ladder truck. The cost of maintaining the department is estimated at $70,000 a year.

Another well-conducted and disciplined branch of the municipal government is the police department. It consists of a chief, four offices and 22 patrolmen.

The finances of Spokane have been ably and economically administered as is evidenced by the low tax rate here of 10 mills. The total bonded indebtedness of the city is $1,200,000. In the building of a great city in less than six years large

civic expenses were necessarily incurred. Of the city's indebtedness $500,000 was for a water-works system and $750,000 was used in building bridges and other public improvements. The taxable wealth of Spokane well justified this expenditure. According to the assessment roll of 1893 the assessment valuation of property in Spokane was $28,776,083. To this should be added $1,110,390, the assessed valuation of property in additions to Spokane lying outside of the municipal limits. These assessment figures were furnished by county assessor, J. F. Leghorn. The election of this gentleman to a position of honor and trust is an illustration of the possibilities for advancement in the West of young men of ability and worth. Mr. Leghorn was born in 1868 in Clonis, County Monaghan, Ireland. He finished his education at the Royal College of Surgeons, Dublin and then came to America, arriving at Portland in 1884. He there secured a position with a large tobacco firm and remained in its employ until 1889. His business duties called him to Spokane where he subsequently opened a wholesale tobacco house under the firm name of Leghorn Bros. This business burned out in 1890, when he was appointed clerk of the Probate Court. In November, 1892, he was elected assessor on the Republican ticket by an overwhelming majority.

PHOTO BY MAXWELL.

HON. J. F. LEGHORN, SPOKANE.

The Spokane water-works system represents an outlay of $750,000. It consists of a pumping station with a developed water power of 2,500 horse, 30 miles of street mains, and 200 fire hydrants. The water supply is pumped from the Spokane river five miles northeast of the city. This water comes from the snowshed of the Cœur d'Alene Mountains and is of the purest and clearest quality.

Spokane is a healthy city. Its death rate in 1893 was only 11.03 per thousand. The dry, invigorating atmosphere and mountain breezes of Eastern Washington are especially helpful to the relaxed system. The long delightful summers are followed by the finest autumnal weather, often extending into December. Then follows a short winter, with occasional heavy falls of snow, but with few extremely cold days. In this connection it is well to call attention to the peculiar climatic conditions of the state of Washington. In this state a change of altitude, often within a distance of a few miles, secures a greater change of climate than is noted in a change of distance of 400 or 500 miles on the Atlantic side of the continent. Owing to the warm influence of the Japan current Western Washington has a long rainy season. The Cascade range of mountains acts as a barrier to the moist winds from the ocean. On the eastern side of this range instead of rain in mid-winter there is snow. The humidity of the atmosphere in Eastern Washington is much less than it is on the western side of the mountains. In Eastern Washington, too, many climatic differences are noted in different localities. In the Columbia and Snake river valleys, for instance, which are from 200 to 1,500 feet below the level of the bordering country, every variety of semi-tropical fruit, except oranges and lemons, is grown to perfection. A change from the semi-tropical conditions of these valleys to the temperate zone of the Big Bend country, is one of the noticeable features of this section. The

difference in elevation between these two sections is not greater than 1,500 feet. It is the diversified resources of the tributary country that have already contributed so largely to the growth of Spokane, and it is the development of these resources which promise the most for the future city.

All inquiries relating to Spokane realty and the resources of the adjacent country will be answered by Walter Hughson & Co., a leading real estate and investment firm of the city. This firm consisting of Mr. Hughson and Frederick E. Elmendorf, controls large interests here. Included in the property controlled by them are the Arlington Heights Additions. This attractively situated property is reached in a few minutes from the business center of the city by the cars of the Arlington Heights motor line.

Medical Lake, Washington.—Around the shores of the Great Medicine Lake as Medical Lake was called by the Indians, camped the sick and the afflicted members of the Colville and Cœur d'Alene tribes of Indians long before the white man invaded this part of Washington. To this little lake, nestling beneath a granite cliff at the edge of the Big Bend country, came the Indians from the tribal lands many suns distant. To them it was a sacred spot furnished by the Great Spirit for the benefit of the sick and debilitated who found renewed vigor by bathing in its waters.

STATE INSANE ASYLUM, MEDICAL LAKE.

The healing and curative properties of the waters of Medical Lake have given it a wide-spread reputation, and it is not infrequently referred to as the "Modern Pool of Siloam." The density of this water is as great as is that of Great Salt Lake in Utah. The least rubbing of the surface of the body touched by the water immediately produces a lather equal to that produced by the best soap. Medical Lake salt evaporated from the waters of the lake now finds a sale in all parts of the United States. It imparts to water in which it is dissolved the properties of the waters of Medical Lake itself. During the summer months thousands of tourists and invalids visit the lake, and excursion trains are run tri-weekly during the season between Medical Lake and the neighboring city of Spokane.

In 1872 Mr. A. LeFevre, a native of France, visited the lake and pre-empted a claim of 160 acres of land along its shores. For years he had been afflicted with paralysis of the right arm caused by rheumatism. Noticing one day some sheep that had the scab plunging into the lake his curiosity was excited. An inspection a few days later of these same sheep led to the discovery that the scab had entirely disappeared. Mr. LeFevre at once determined to apply a little of the water to his arm. To his great surprise the blood soon began to circulate naturally in the afflicted member. A few weeks later the last trace of the former paralysis disappeared and today Mr. LeFevre, who is a highly respected and wealthy citizen of Medical Lake, emphasises the story of his cure by gesticulating with the very arm of which for years he was denied the use.

Rapid settlement followed Mr. LeFevre's location at Medical Lake. It at once became a great resort for invalids. On the east bank of the lake has since sprung up an attractive and prosperous town which bears the name of the lake on which it is located. The town of Medical Lake contains today about 1,000 people. It is in Spokane county, 20 miles west of Spokane by the Seattle, Lake Shore & Eastern

branch of the Northern Pacific, and 10 miles west of Cheney by the Central Washington branch of the same road. Immediately west of Medical Lake and occupying a commanding and picturesque location on the summit of a high hill overlooking the placid waters of the lake is the Eastern Washington Hospital for the insane. A short distance from the immense structure occupied by the asylum are great granite quarries. Stone from these quarries is in great demand in Washington, and the quarrying of this stone is Medical Lake's most important industry.

The Big Bend Country.—The largest subdivision of agricultural land in the state of Washington lies near its geographical center, and is known as the Big Bend country. The northern, western and part of the southern boundary of this section is formed by the Columbia river, which describes an irregular half circle here from which the section it encircles derives its name, Big Bend. To the east the Big Bend country is bounded by the rich Palouse wheat belt, which stretches away to the east into the state of Idaho.

The Big Bend country includes the counties of Douglas, Lincoln, Adams and Franklin, which together have an area of 9,300 square miles, or nearly 6,000,000 acres. The northern portion of the Big Bend country, or about one-third of its total area requires no irrigation to produce good crops of grain and vegetables. The southern portion at the present time is principally utilized for stock raising, farming here without the aid of irrigation being an uncertain calling. This southern part of the country however, invariably produces a good growth of bunchgrass each season, which being self-curing, offers the best of food for cattle and horses during even the most protracted of winters.

The surface of the Big Bend country is generally less hilly and rolling than are the agricultural lands of any other parts of the state. There is but little surface water on this vast area, but water is easily obtained by digging or boring to a depth of about 50 feet. The soil here is similar to that all over this section, being decomposed volcanic rock [a fertilizer in itself.] In the northern half of the country however, the soil does not approach the ashy appearance noted in the soil of the southern part. This is owing to a greater rainfall in the north, and also to the mixing of a vegetable mould formed from years of decay of the rank grasses which have covered this section.

It is stated by leading chemists that the soil here will prove the most lasting, and stand more continued cultivation than any other soil in the world. Before this time a lack of proper railroad facilities has greatly retarded the growth of this fertile part of Washington. This however are now obviated. There are today two transcontinental lines of road, the Great Northern and the Northern Pacific passing over this country. The country is also crossed by two branches of the latter road, the Washington Central and the Seattle, Lake Shore & Eastern. These roads furnish ample transportation facilities for the needs of the country at the present time, but on its fuller development, it will tax these systems to their full capacity to haul its products to market.

Situated on the broad plateau of Eastern Washington, and at an elevation of over 2,000 feet above sea level, the Big Bend country is free from the blighting effects of the hot winds, and although occupying a higher elevation than any other part of the farming section of the state, this section is singularly free from frosts during either the time of growing or maturing crops. Early or late frosts never destroy tender vegetable plants or fruit in this part of the state.

A disadvantage this section long labored under was the impression which for some unaccountable reason was widespread, that crops would only grow well here at irregular intervals on account of a supposed deficiency of moisture here to insure the proper maturing of vegetation. After a practical trial of nine years, this feeling of prejudice, for such it has proved to be, has been entirely dispelled. During all this time there has not been a single failure of crops recorded in the Big Bend country, and it has been shown that this is one of the most productive sections of the state. The crop from the farms here each season would seem phenomenal to the farmers of the Middle and other Western states. The staple crops of the Big Bend country are wheat, oats, barley and corn, yielding respectively 25, 50, 70 and 30 bushels per acre, and upwards. It has only been recently that the farmers of this section have turned their attention to fruit growing, but now may be seen thriving young orchards of apples, pears, cherries and plums. The smaller fruits including berries, all do well here. The principal centers of population of the country furnish a good market for fruit, and fruit growing has already been shown to be one of the most profitable industries of the husbandman.

In Douglas county alone there are still open to settlement 800,000 acres of goverment land (land needing no irrigation), and Lincoln county offers 250,000 acres more of governent and railroad land. The best sections of the Big Bend are of course in the vicinity of the principal towns of this section. This favored section may be said to commence at Reardon, and extends west through Mondovi, Davenport, Wilbur, Almira, Coulee City and Waterville. The latter is a thriving town, 50 miles from a railroad. The town possesses electric lights and other modern public improvements. The country surrounding Waterville produces over 1,000,000 bushels of grain annually, a portion of which finds a market in the great mining regions to the north. The Big Bend Country is rapidly filling up, and each year witnesses an increase of over 100 per cent in the acreage sown to grain here. It is a country of practically no extremes in heat or cold. During the spring, summer and autumn the weather here is delightful, the temperature, even during mid-summer, seldom registering above 85°, while the nights are always cool and pleasant. The winters are comparatively mild, with heavy falls of snow at times. Sunstrokes, electrical storms and cyclones are unknown here. The harvest seasons are free from showers, and in consequence the grain harvested here is of a beautiful light yellow color, which recommends it especially to buyers.

HORSE AND MULE RANCH, DAVENPORT.

An ordinary team of horses can easily break the virgin soil of the Big Bend country, and a good crop of oats or wheat can be raised on this land the first season. There is still plenty of government land in this part of the state, perhaps a little remote from settlements, but in the line of projected railroads. This land is as good as the best that is now under cultivation. The seeker for a home in the West will find here a chance to obtain some of the finest grain-producing land in the West, and it is this part of the state which offers exceptional opportunities for settlement at the present time.

Davenport, Washington.—At the gateway of the 6,000,000 acres of rich agricultural land comprising what is known as the Big Bend country of the Columbia river, is the prosperous town of Davenport. It is a station on the Central Washington railroad, a line operated by the Northern Pacific, and is 45 miles west of Cheney.

PHOTO. BY A. H. ALBRECHT.

THRESHING GRAIN, DAVENPORT.

Before the advent of the white settler in this part of the West, the present site of Davenport was the over-night camping ground on the Indian trail to Western Washington. The spring at this point, which today pours out its steady volume of the purest water, refreshed many of the savage tribes in their long journeys across the bunchgrass lands of this part of the state, and this, with other advantages which the site enjoys, made this one of the most popular stopping places for the Indian hordes in the West.

In 1879 Charles C. May, at the present time Davenport's foremost citizen, while engaged on a government survey in Eastern Washington, became impressed with the belief that the Big Bend country would some day become a great and well settled farming section. As an experiment of the fertility of the soil of this part of the state, he selected a claim and sowed 40 acres of this land to wheat. This was the first attempt to till the virgin soil of the Big Bend. When the crop of these few acres was harvested a showing of 40 bushels of wheat to the acre was made. It has only been within the past six years that immense quantities of grain have begun to be shipped from the Big Bend country. Each succeeding year, since 1879, has witnessed an increase of 100 per cent in the acreage sown to grain in this section, and the crop of 1893 was at least four times as great as that harvested here in any previous year. Fruit raising is also carried on very successfully in this part of the state, and especially in the vicinity of Davenport. Apples, pears, apricots and cherries seem to grow as well as these varieties of fruit do in any part of Washington. Peaches are grown on the sandy lands bordering on the Columbia river, but this fruit does not do well on the plateau back from this great stream. Currants, raspberries, gooseberries and strawberries give large yields here. Fifteen acres of strawberries, near Davenport, produced 35,000 quarts in 1893. This entire crop found a ready market at Spokane. About 350,000 acres of the rich lands of the Big Bend country are directly tributary to Davenport, but beyond this district the trade of this important town extends for many miles up the Columbia river.

PHOTO BY A. H. ALBRECHT.

HAWK RIVER FALLS NEAR DAVENPORT. (HEIGHT OF FALLS, 60 FEET.)

Davenport was founded in 1882, by John Nichols. Eight years later the town was incorporated. Davenport now claims a population of 800. It possesses the advantages of an exellent public school, with an enrollment of 160 scholars. There are also established at this point a flouring mill with a daily capacity of 150 barrels, two weekly newspapers, a well conducted hotel, a national bank, and a number of very important business houses.

PHOTO BY A. H. ALBRECHT.

BIG BEND NATIONAL BANK BUILDING, DAVENPORT.

The Big Bend National Bank, of Davenport, was established in 1879. It has a capital stock of $50,000, and a surplus and undivided profits amounting to $60,000. During the financial panic of 1893, when bank after bank suspended payment, the Big Bend Bank not only rendered assistance to other banks, but also continued to make loans at a time when most of the financial institutions of the country refused to discount the very best of negotiable securities. The Big Bend National Bank enjoys the business and confidence of the people who live even as far remote from Davenport as the Okanogon mining district. It is considered, in financial circles, as one of the strongest banks in Washington. The officers of the bank are as follows: Dr. N. Fred. Essig, president; D. M. Drumheller, vice-president; C. C. May, cashier, and A. F. Lambert, assistant cashier.

About 12 miles from Davenport is the Egypt mining district, where some development work is now being done. The ore from this district assays from $40 to $100 in silver and $8 in gold. Extensive marble quarries are being worked 22 miles from Davenport. Another resource of this tributary district, though perhaps of doubtful value at the present time, lies in the opal fields, some six miles distant from the town. Experts have pronounced the opals found here to be of an excellent quality, and if they can only retain their lustre and color, the mining of these gems will, in time prove of considerable value to the district in which the mines are located.

Wilbur, Washington.—Wilbur is an important station on the Central Washington branch of the Northern Pacific, 74 miles west of Cheney and 90 miles west of Spokane by this line of road. It is located in Lincoln county, in the heart of the great wheat belt of the Big Bend of the Columbia river. Wilbur is the trading point for a large and prosperous farming community. The principal pursuits followed by the farmers here are the raising of grain, fruit and live stock. The same conditions exist here for the successful pursuits of diversified farming as are found in the sections of rich country tributary to Sprague, Cheney, Davenport and other important trade centers of the state and which are fully described in the articles on these respective localities.

VIEW OF WILBUR.

Wilbur contains a population of about 500. It has a flouring mill with a daily capacity of about 100 barrels of flour, a bank, public school house and a well-edited weekly newspaper.

Coulee City, Washington.—Coulee City is the terminus of the Central Washington branch of the Northern Pacific railroad. It is located in Douglas county, 124 miles west of Spokane by the line of road, and 108 miles west of Cheney, where the Central Washington connects with the main line. It is from Coulee City

that the supplies for Waterville and other smaller places in the Big Bend country are freighted by team. Stages run daily from Coulee City to Waterville, a distance of 45 miles, and connection is made at the latter point with stages for the Okanogan mining district as well as with stages for Wenatchee and points on the Columbia river. The country immediately surrounding Coulee City is rocky and barren and is not adapted to agricultural purposes. The town owes what importance it possesses to the fact that it is the outfitting and freighting point for a fertile and well cultivated part of the Big Bend country some miles distant.

COULEE CITY.

Lake Chelan.—Lying immediately beyond the broad, rolling plains of Douglas county and the Columbia river, is Lake Chelan, the most beautiful of Western lakes. It nestles among the mighty mountains of the Cascades at an elevation of 900 feet above sea level. The lake is 72 miles in length and from two to four miles in width. Its surface comprises an area of over 900 square miles and it is navigable for large steamers its entire length. For beautiful and varied scenery, the country surrounding Lake Chelan cannot be surpassed.

LAKE CHELAN.

The lake is fed by streams having their source among the mighty glaciers of the higher ranges of the Cascades. It is drained by a foaming river which flows south for three miles and empties into the Columbia. This stream bears the name of the lake which is its source of supply. Before emptying into the Columbia, the Chelan river cuts its way through a narrow and tortuous canyon. In its course through the defile it is a mass of foam and spray. At the mouth of the canyon it plunges down over ledges of rock in a series of cascades, forming what is known as the Chelan falls. It has been estimated by hydraulic engineers that with the use of the lake as a reservoir, the Chelan river would afford a power of 18,000 horse. The extent of the power which could be derived from this stream can be appreciated from the statement that in its short course of three miles the fall of the river is 300 feet,

CEDAR FALLS, LAKE CHELAN.

Lake Chelan is one of the deepest lakes in the world. During 1892 the United States Geological Survey sounded it to a depth of nearly 1,200 feet without reaching bottom. How much deeper the water is than this can only be conjectured. Lake Tahoe, in the Sierra Nevada Mountains, now ranks as the deepest lake in the United States. Its greatest depth is 1,645 feet. Of European lakes there are but two deeper than Tahoe. These are Lake Maggiore and Lake Lago di Como, in Italy. Lake Chelan certainly ranks as one of the deepest lakes in the world and future soundings may entitle it even to the first position in deep fresh-water bodies.

For a distance of 12 miles from its lower end Lake Chelan is surrounded by low,

undulating and bunchgrass-covered hills. The lake then bends almost at right angles and from this point along its course the country becomes more mountainous and the scenery from its surface grander and more picturesque. The mountains rise here from the waters' edge for thousands of feet stretching back from the line of vegetation to where the great glaciers of snow and ice are found. The surface of these glaciers melts in summer, but the main body of glaciers high up in the mountains are never affected by the summer heat. A number of beautiful cascades and water falls can be seen from the lake, principally from its western shores. These falls leap from heights of hundreds of feet, falling in spray into the deep waters below. The upper 35 or 40 miles of the lake comprise what is probably the finest mountain-girt stretch of water in the United States.

CRANE'S FALLS, LAKE CHELAN.

At the head of Lake Chelan is Castle Rock, the most prominent landmark on its shores. Towering to a height of 10,500 feet, its slender peak resembles a huge needle pushing its way upwards through the dark green of the heavily-wooded hills below. For miles down the lake this enormous shaft can be seen rising high above the neighboring peaks. One of the most awe-inspiring sights of the lake is the rocky wall which extends for a distance of 10 miles along the shore, its bold and craggy face unbroken save here and there by some silvery stream which dashes down hundreds of feet over its perpendicular face. Along the shore line of the lake and immediately back of it are deep and dark gorges, pyramidical crags, castellated and turreted cliffs, lofty precipices, gigantic domes and numerous sparkling trout streams. The scenes along this lake present a panorama of ever-changing beauty. A writer has said that there is no more beautiful or purer body of water in the world than Lake Chelan and the scenery along its banks and precipitous walls excels the scenes of Switzerland, which many Americans annually cross the Atlantic to view and extol.

CASTLE ROCK, LAKE CHELAN.

The largest streams emptying into Lake Chelan are Railroad creek and Stehekin river. About 10 miles up Railroad creek there is a vertical fall of 1,600 feet, and above this fall is another 900 feet. Above this second fall is a beautiful little lake which nestles among high mountain peaks, below which are immense glaciers 100 miles or more in extent. The Stehekin river is a much larger stream than is Railroad creek, and numerous tributary streams empty into it. Rainbow creek enters the Stehekin about two miles above the lake. Near the mouth of Rainbow creek is a fall 300 feet high, which goes by the name the river bears. Forty miles above the foot of the lake Bridal Veil falls drops into it, making a last vertical plunge of 75 feet to the placid waters of the lake below. Following this stream up for 1,000 feet the traveler comes to Crane Lake, a clear crystal sheet of water, three miles long and surrounded by rugged mountains green with dense forests of fir, pine and cedar.

RAINBOW FALLS LAKE CHELAN.

Lake Chelan is not in the beaten track of tourists. It is remote from railroads and is reached only by stage from Coulee City, the terminus of the Central Washing-

ton branch of the Northern Pacific or by boat and stage from Wenatchee, a station on the line of the Great Northern railroad.

The Colville Valley, Washington.—Forty miles north of Spokane and lying on the summit of the divide between the Spokane and Colville valleys is Loon Lake, a beautiful sheet of water four miles long. The south and west walls of this lake are walled in by high mountains. Extending north from the lake to Kettle Falls on the Columbia river is a fertile valley varying in width from 1 to 10 miles. This valley, the greatest in Eastern Washington, is perfectly irrigated by nature. Through its center flows the Colville river, a deep, narrow stream fringed with a growth of thick, matted brush. The valley is enclosed on each side by granite-ribbed and densely timbered hills from the springs of which hundreds of brooklets trickle down the hillside to the river below.

SCENE, COLVILLE RIVER AT KETTLE FALLS.

The soil of the Colville valley is a rich, black loam. From 4 to 16 feet of this mould lies over a solid floor of bedrock through which the water cannot escape. There are not less than 90,000 acres of meadow land in the Colville valley and the valleys tributary to it. On account of the close proximity of this valley to market the raising of hay on the lands here is an important and profitable business. The demand for hay in the neighboring mining districts and cities is in excess of the supply, and as a consequence good prices can always be obtained for it. The average yield of timothy hay per acre in this valley is 2½ tons. The meadow lands of the valley are capable of producing annually 225,000 tons of hay. In addition to the hay cut from the meadows the adjacent bench lands produce bountiful crops of oats, barley, wheat and vegetables.

At the upper end of the Colville valley is the Colville Indian reservation. One-half of the 2,800,000 acres of this reservation are now open to settlement. It was in this part of the valley that the Hudson's Bay Company established a trading post in the early years of the present century. In 1839 Father Demers, a Jesuit missionary, visited the Colville Indians. Five years later St. Paul's Mission was founded on the banks of the Columbia river where the mighty waters leap over the rocks, forming what is now known as Kettle falls.

In 1890 the Spokane Falls & Northern railroad was built north from Spokane through the valley to the international boundary line. Along this line are the flourishing towns of Springdale, Chewelah, Sherwood, Colville, Kettle Falls, Marcus and Meyers Falls. At the latter place the water power afforded by the falls here was first used by the Hudson's Bay Company in 1816 to run a flouring mill. On the site of this old mill a large mill has been erected with a daily capacity of 100 barrels of flour. The river here in a distance of three-eighths of a mile falls 135 feet.

Beyond the valley and before the international boundary is reached are the new towns of Little Dalles, Northport, Pend d'Oreille and Boundary City. At Little Dalles the Columbia river, in flowing over huge masses of submerged rocks, forms a series of wild rapids, which are an effective barrier to navigation. This town is the trading center of a rich gold-mining district, the ore from which is shipped to Northport, where it is reduced in a pyrites smelter. The town of Pend d'Oreille is situated at the confluence of the Columbia and Pend d'Oreille rivers. The latter stream

rises in the mountains surrounding Butte, Montana, where it is known as Silver Bow creek. Before it reaches Lake Pend d'Oreille, it is successively known as the Deer Lodge, Hell Gate, Missoula and Clarks Fork of the Columbia.

Journeying westward through the Colville country a succession of charming landscape views greet the eye. Leaving Spokane the railroad runs through a pine forest broken here and there by huge masses of basaltic rock, until Loon Lake is reached. The line skirts one side of the lake and descends from this point into the Colville valley. The transition from the unproductive and rock-strewn land of the Spokane valley to the fertile and picturesque Colville valley is as sudden as it is refreshing. The meadows with their luxuriant growth of green grass, the alder, birch and cottonwood-fringed river, the herds of cattle grazing on the bench lands and the neat homes that dot the valley form a pastoral scene which suggests to the mind all the elements of plenty and contentment. After leaving Colville, one of the oldest settlements in Washington, the line crosses a country which gradually becomes more rocky and more undulating. Finally the railroad winds around a high and granite-studded hill and then there breaks upon the vision of the astonished beholder a panorama of surpassing beauty and grandeur. It is here that the broad plateau of Eastern Washington ends. It ends not in mountains or river banks, but in a sheer perpendicular precipice, 1,500 feet below the summit of which is the valley of the Columbia river. Far down the valley from the top of the plateau the snake-like course of the Columbia can be seen as it wends its way to the distant ocean.

KETTLE FALLS, COLUMBIA RIVER.

The mineral resources of the Colville country are as great, if not greater than its agricultural wealth. The mountains that line the valley on either side contain enormous deposits of galena ore. In the vicinity of Colville are the Old Dominion and Bonanza mines, both long known as bonanza properties. Of the numerous other mines in the Colville district, the most valuable and best developed are the Silver Lake, Dandy, Excelsior, Tenderfoot, Eagle, Dead Medicine, Daisy, Silver Crown and Young America.

With the exception of the famous ledges of San Juan Islands there are no extensive ledges of limestone of a superior quality in Washington outside of the Colville country. In the southern end of the Colville valley are several large lime kilns owned by Spokane capitalists. Near Meyers Falls there is another large deposit of limestone which is burned for local use. In the same vicinity there is a vein of clay, 60 feet thick from which a superior quality of brick is made. Of building stone the Colville country contains an inexaustible quantity of the best and most durable varieties. Much of the granite and marble in the massive buildings of Spokane came from this locality.

Beyond the northern end of the Colville country proper are several rich mining districts locally known under a variety of names. Of these districts the Boundary, Metaline and Northport are the richest and most prominent.

There is still much vacant land ready for occupancy in the Colville country. With its great diversity of resources, its splendid water powers, its equable climate and its excellent rail facilities, it is rapidly becoming one of the most prosperous sections of Washington.

Colville, Washington.—Colville, the seat of justice of Stevens county, is an important station on the line of the Spokane Falls & Northern railroad, 88 miles north of Spokane. It is picturesquely located in the north end of the Colville valley, a fine body of land of about 50 square miles in extent.

The country tributary to Colville is rich in timber and minerals and much of this land is the most productive in the state. The Colville valley produces large crops of grain and timothy hay. It is well watered by mountain streams through its entire extent and unlike some other parts of Washington, this section requires no irrigation to insure abundant crops. This is an excellent dairy and stock section. Fruit does well here and some of the finest orchards in Northern Idaho are found in the vicinity of Colville. The products of the Colville valley find a good market at Spokane and in the great mining districts adjacent.

The mountains on either side of the Colville valley are rich in gold, silver, copper, galena and iron. Immense quarries of marble and sandstone are also found here. All these mineral resources are being rapidly developed and the constant prospecting that is being done here is regularly opening up new mining districts. Within six miles of Colville is situated the Old Diminion mine, a very valuable property which since the time it was first opened has turned out over $250,000 worth of silver ore. The Bonanza and a number of smaller silver mines in the vicinity of the town have also been large producers and the working of these properties has done much to add to the solid wealth of the place.

In the Colville and neighboring valleys are still large areas of unsettled land suitable for the highest state of cultivation. This land is valuable for agriculture fruit culture or grazing purposes. Colville occupies a commanding position in the midst of a section rich in the diversified resources of agriculture, fruit growing, stock raising, timber and mining. Its present population is about 900 and it is the most important town in Washington north of Spokane. It has a bank, a good public school, two weekly newspapers, a small smelter and several churches. The disaster which has overtaken the silver-producing territories of the United States has in a measure affected Colville's prosperity, but the backing of the town is good and the present temporary depression will only have the effect to spur the people here to renewed effort, and with the settlement of the tributary district Colville will continue to make the same steady advancement that has been made here during the few years past.

Walla Walla, Washington.—Walla Walla is the second city in population and commercial importance in Eastern Washington, Spokane alone being ahead of it. It is the seat of justice of Walla Walla county, one of the oldest settled and today one of the most productive parts of the Northwest. The county is justly famous for its annual large production of wheat and fruit. Walla Walla itself is a modern city of about 7,000 population. It occupies a most attractive site in the Walla Walla valley, a section that is perfectly watered and the soil of which is as productive as is any of the best land on the coast.

PHOTO. BY GREENWOOD.

STREET SCENE, WALLA WALLA.

Walla Walla is especially favored in the matter of transportation facilities. It is only a daylight run from Walla Walla to either Portland, Spokane,

Seattle, or Tacoma, and the city is reached either over the lines of the Union Pacific, Northern Pacific, or the Oregon & Washington Territory Railroad Companies. Surrounded as the city is by a productive and highly prosperous section of country, the growth of Walla Walla has been the result of the demand of the country itself for a large commercial center at this point. Walla Walla was never boomed, and yet there is perhaps more wealth represented here in proportion to population than at any other inland city of the coast.

The approach to Walla Walla by rail from either direction, is intended to give the traveler a favorable impression of the country he is passing through. There is an enviable spirit of rivalry shown between the different farmers of the fertile lands in this section of the state, and in the vicinity of Walla Walla are farms that are not only highly productive, but which are also made as highly attractive as constant care can make them. The farmers here avail themselves of the generous use of the latest improved machinery, special high grades of horses have been encouraged for farm use, the finest breeds of cattle and sheep have received especial attention, and the buildings occupied by the rural classes are made neat and attractive from an architectural standpoint, and they are comfortably and in many cases, even elegantly furnished.

COURT HOUSE AND HALL OF RECORDS, WALLA WALLA.

Walla Walla is a city typical of Western push and energy. Its main business blocks are of brick and granite, two and three stories in height and of a modern style of architecture. The streets of the city are all wide and well kept, they are well shaded, and the many fine lawns seen in front of the private residences speaks much for the good taste and thrift of the inhabitants. Rising above the tops of the great poplars which shade the main streets are the spires of 13 churches. The denominations represented are the Baptist, Presbyterian, Congregationalist, Christian, Episcopal, Methodist, Lutheran, United Brethren, Catholic and Seventh-Day Adventist. The educational advantages of the city are of the highest order. The public schools are conducted in two large brick buildings, one of which was recently erected at a cost of $40,000. The number of pupils in attendance at the public schools here during the past year was 1,000. The grades of study, under the public system of instruction, range from the primary up to and including the high school. In addition to the fine public schools, Walla Walla is the seat of Whitman College, which is conducted under the auspices of the Congregational church. This institution affords a full collegiate course of study, and is liberally patronized. St. Patrick's school for boys, and a Catholic convent for girls, are also located at this point, as well as a business college and an academy of fine arts. The Seventh-Day Adventists have a fine college building in course of erection at Walla Walla. This will be a union college of that denomination for the states of the Pacific Northwest.

PAINE SCHOOL, WALLA WALLA.

Prominent among the business houses of Walla Walla are the banks. The five banks established here enjoy a standing in financial circles that is not surpassed by any moneyed institutions of the coast. The business houses carry large stocks, and Walla Walla, like Portland, does business principally with home capital. While not a great manufacturing center, Walla Walla boasts of three roller-process flouring

mills, two planing mills, a foundry and an agricultural implement manufactory. These several industries together furnish employment to a considerable number of men, and they are all conservatively and ably managed.

Walla Walla is especially proud of the excellent transportation facilities enjoyed. The rival lines of the Union and Northern Pacific furnish easy means for the Walla Walla merchant to ship his goods from the large Eastern markets, and they also afford equally advantageous facilities for shipping the great wheat and farm products of the tributary section to tidewater at Puget Sound or to Portland. The Oregon & Washington Territory railroad, which taps the best part of Eastern Washington and Eastern Oregon as far south as Pendleton, and passing through Walla Walla, has done much to advance the interests of the latter city. These three lines of road furnish, at the present time, ample transportation facilities for the section of country of which Walla Walla is the commercial center.

OPERA HOUSE, WALLA WALLA

Walla Walla furnishes its citizens with all the benefits of a free library, an opera house with a seating capacity of 600, a handsome court house, a city hall, and a well appointed and ably conducted hospital. The Odd Fellows' Temple here is one of the most imposing buildings of the city. The press is represented by *The Union-Journal*, an ably edited daily publication, which handles associated press dispatches, and *The Daily Statesman*, one of the best known papers of the state. The city is lighted both by gas and electricity, it has a fine street railway line, efficient water works, and a well organized and thoroughly equipped fire department.

PHOTO. BY GREENWOOD.

FIRE DEPARTMENT HEADQUARTERS, WALLA WALLA.

Adjoining the municipal limits of the city on the west is Fort Walla Walla, a government military reserve which occupies a fine piece of land one mile square. This fort was first established here in 1856. It now contains five troops of the fourth cavaly. The grounds and buildings of the post are kept in the best of order, and it is one of the most interesting features of Walla Walla's many attractions. About $500,000 are annually expended by the government in the support of this post, and most of this money is of course spent in Walla Walla.

The state penitentiary, located at Walla Walla, is said to be one of the best conducted penal institutions in the United States. The grounds connected with the penitentiary are 155 acres in extent. They adjoin the limits of Walla Walla. The penitentiary building itself has a capacity for 500 convicts. The present number of convicts confined here is about 450. To furnish employment for these inmates a mill containing 70 looms and other machinery necessary for making jute bags has been provided by the state at a cost of $155,000. In addition to the jute plant a large number of convicts are employed in the brick yard connected with the institution, while those of the convicts who do not find work in the jute mill and brick yard are employed in various capacities around and in the

PHOTO. BY GREENWOOD.

ENTRANCE TO PENITENTIARY WALLA WALLA.

penitentiary. The jute mill has a capacity of 4,000 bags a day, and the number of men employed in the mill is about 300. The bags are manufactured from the raw material and find a ready sale among the farmers at the price of 6¼ cents each. The cost of maintaining the penitentiary to the state for the fiscal year 1892 was in excess of $268,000.

PENITENTIARY, WALLA WALLA.

Walla Walla is reputed to be one of the wealthiest cities in the United States in proportion to population. The assessed value of property in the city subject to taxation in 1892 was $3,106,290. The article on Walla Walla county, of which Walla Walla is the trading and banking center, will afford much valuable information on the basis of the city's prosperity.

Walla Walla County, Washington.—The boundary lines of Walla Walla county are the Snake river on the north, the state of Oregon on the south, Columbia county on the east and the Columbia river on the west. The county has an area of about 1,200 square miles and it is one of the oldest and most thickly settled sections of the state.

With the exception of a narrow strip on the western border, Walla Walla county is a solid body of rich, rolling agricultural land. The rainfall in this part of the state is sufficient to insure abundant crops and no irrigation is necessary here, except perhaps on rare occasions and on the lightest soils, and then only on such crops as vegetables and other garden products. Wheat is the staple product of the county. The yield of wheat here is from 25 to 50 bushels per acre, and other cereals do equally as well. Walla Walla valley, in this county, about 30 miles square, is rapidly gaining fame as a favored fruit-producing belt. Large quantities of apples, pears, plums, peaches, cherries, prunes, grapes, strawberries, blackberries and other small fruits are annually shipped from the valley. These shipments are made principally in carload lots, and the leading market is found in the East. The following statement of the product of four acres of land in this valley and its value during 1892 will be of interest in this connection. This land is owned by a well-known resident of Walla Walla. The showing was as stated below: 16,000 pounds strawberries at 6 cents, $960; 500 pounds raspberries at 7 cents, $35; 1,000 pounds blackberries at 8 cents, $80; 4,000 pounds cherries at 7 cents, $280; 7,500 pounds prunes, one-half at 3 and one-half at 5 cents, $300; 2,000 pounds apples at 2 cents, $40; 500 pounds pears at 3 cents, $15. The total value of the product of this little piece for a single year is thus shown to have been $1,710, which can be taken as an indication of the value of the land of this part of the state for fruit-growing purposes.

One advantage fruit growers of Walla Walla valley have over the fruit producers of other parts of the Northwest is that they can get their fruit to the market about a month earlier than the growers in other parts of Oregon and Washington can. Fruits ripen in the Walla Walla valley about the time that California fruits of the same variety first put in their appearance in this market.

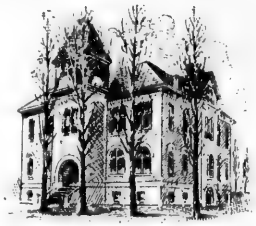
The value of farming lands in the vicinity of Walla Walla and Waitsburg, the leading centers of population in the county, varies from $50 to $100 per acre. Large quantities of land adapted to the highest state of cultivation and near railroad lines, can be purchased in this county for from $5 to $20 an acre. An important industry

in the county at the present time is the raising of fine stock, including horses, cattle and sheep. During 1892 the agricultural products of the county made the following showing: wheat, 3,696,937 bushels; barley, 687,609 bushels; oats, 120,240 bushels; corn, 49,000 bushels; rye, 25,362 bushels; timothy, 4,132 tons; alfalfa, 6,700 tons. The population of the county today is about 15,000 and the wealth of the county, as shown by the assessment rolls, is in the neighborhood of $12,000,000.

Waitsburg, Washington.—Waitsburg, in Walla Walla county, is one of the most progressive towns in Eastern Washington. It is attractively situated in the heart of the Touchet valley, 18 miles northeast of Walla Walla, and 273 miles east of Portland. Two competing lines of railroad, the Union Pacific and the Oregon & Washington Territory line, the latter having the closest traffic arrangements with the Northern Pacific, have done much to advance the interests of Waitsburg. The place now contains a population of about 1,000 and the business done here is on a most satisfactory basis.

Good public highways connect Waitsburg with a thickly settled and productive farming country. The Touchet valley, of which Waitsburg is the commercial and trading center, varies in width from one to five miles and is about 30 miles in length. The lands of this valley are especially adapted to the production of wheat and other grains as well as fruits and vegetables. The Touchet river runs the entire length of the valley. This stream by a fall develops sufficient power at Waitsburg to run a number of large factories. At the present writing, however, this power is only utilized to run a flouring mill with a daily capacity of 180 barrels. Waitsburg stands ready to donate the free use of water power to any manufacturing enterprises of merit that will locate here. Located as the town is, in the midst of a country that produces an abundance of raw material for manufacturing purposes, the advantages offered here to manufacturers will probably not long be neglected.

Waitsburg boasts of one of the most attractive public school buildings in Washington. It is a two-story brick having eight large and well ventilated rooms and was erected at a cost of $16,000. The average number of pupils in attendance at this school during 1892 was 250. Six teachers are employed in the schools and an excellent system of instruction is adopted. The Waitsburg Academy, under the auspices of the United Presbyterian church located at this point enjoys a large attendance from both Washington and Oregon. The course of study at the academy is designed to fit its graduates for entrance to the best American colleges. Waitsburg has just completed an excellent system of water works. It is a gravity plant, the water being obtained from the Coppei river, a pure, mountain stream three miles distant. A well-trained and perfectly equipped fire department is maintained here and the city is well lighted by electricity and contains every modern improvement found in any progressive town of this size.



SCHOOL BUILDING, WAITSBURG.

Waitsburg supports six church organizations, four of which, the Presbyterian, United Presbyterian, Christian and Methodist, have buildings of their own. The town maintains a free library. A company of the Washington National Guard has been organized at this point and this company is well drilled for efficient service.

All lines of business are prosperous. There is one national bank here, two weekly papers, *The Times* and *The Democratic Banner*, one first-class hotel and two well-stocked livery stables.

Waitsburg, like Walla Walla, depends for its prosperity on the richest of tributary countries. Crops in this part of Washington are never known to fail and the satisfactory growth the place has made in the past is doubtless nothing more than will be realized in the future as the population of the tributary section increases.

HON. J. H. MORROW, WAITSBURG.

One of Waitsburg's most prosperous, enterprising and public-spirited citizens is the present mayor, Mr. J. H. Morrow. Mr. Morrow is a native of Missouri, having been born in that state in 1853. He received his education in the public schools and McGee College, Missouri, and in 1874 he emigrated to California, where he taught school for three years, when he removed to Walla Walla. At the latter place Mr. Morrow held the position of principal of the Baker Public School until he decided to engage in the general merchandise business in Waitsburg. Mr. Morrow is now the successful manager of the J. H. Morrow Mercantile Company, one of the largest general merchandise stores in Walla Walla county.

Mr. Morrow has always taken a prominent part in every enterprise designed to promote the interests of his own town and surrounding community. As mayor of Waitsburg he has shown himself a conservative yet efficient officer.

One of the largest general merchandise stores in Walla Walla county is that of the S. W. Smith Company, at Waitsburg. This successful firm carries a stock of goods valued at $40,000 and enjoys a trade that already extends over a section of country comprised within a radius of 20 miles of Waitsburg. Mr. L. B. Haberly until recently of Portland, Oregon, is at the head of the company, and through his efficient management the already large volume of business enjoyed by the firm is rapidly increasing.

Dayton, Washington.—Dayton, the judicial seat of Columbia county, Washington, is situated between the forks of the Touchet and Padit rivers. It is a prosperous point of about 2,300 population, and is the trading and shipping center for one of the best productive sections of Eastern Washington. It is the terminus of the Dayton branch of the Union Pacific railroad system. This system of roads covers the best part of Eastern Washington and Northern Idaho, and has direct connection with the main line at Pendleton by means of the Washington division of this road. In addition, Dayton is also the terminus of the Washington & Columbia River railroad [the Hunt line], which has direct connection with both the Union and Northern Pacific systems at Hunt's Junction. These two roads may be classed as competing lines, and Dayton thus enjoys the best of transcontinental facilities.

COURT HOUSE, DAYTON.

Columbia county produces on an average 2,000,000 bushels of wheat per year.

More than one-half of this product is either ground into flour at Dayton or is shipped from this point. In addition to the heavy wheat shipments, Dayton also ships annually, large quantities of rye, barley and corn. Like the other favorably located points of Eastern Washington, Dayton's trade is steady and of a stable nature, and the merchants generally are in a prosperous condition.

The Touchet river at Dayton develops a considerable horse power. The water here rushes down a declivity with great force, the fall being 70 feet to the mile. Two large flouring mills, one with a capacity of 250 barrels and the other of 50 barrels capacity a day, a brewery, a foundry and a planing mill are run by the power generated by the Touchet river at Dayton. This power is capable of very full development, and by the expenditure of a little money, this could be made one of the most available water powers in the state.

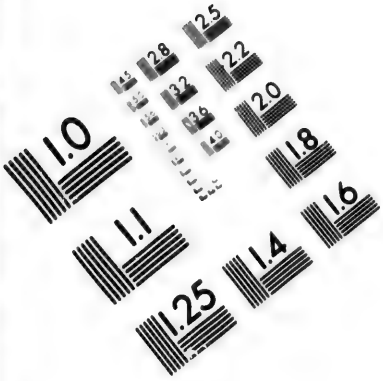
Dayton is an attractive town. Its main business street, which is broad, is well built up with imposing brick buildings, some of which are two and three stories in height. The residence streets are well shaded, and are graced with some very attractive private homes. An imposing structure in the town is the brick and stone court house. This building occupies a site on an entire block on the main street. The building and grounds represent to the taxpayers of Columbia county, an outlay of $50,000. The grounds surrounding the court house are well kept, and this is one of the most attractive features of the city. In Dayton are three public school buildings, one large central structure, and two smaller edifices. The average daily attendance at these schools in 1892 was 450. Nine teachers preside over the various departments in the main building, and the grades of instruction adopted are equal to those of the best public schools of the state. The town supports a free library that would be a credit to a city of twice its size. A thousand or more volumes of standard literature, the leading periodicals, together with a number of leading daily papers are kept on file here. The library is in charge of a salaried librarian, and its affairs are carefully managed. Of the religious organizations in Dayton, the Presbyterian, two Methodist, Congregational, Christian, Baptist, United Brethren and Catholic orders own church buildings. The press of the town is represented by *The Columbia Chronicle*, *The Courier* and *The Inlander*, three well supported weekly publications. The people of Dayton have the advantage of a neat little brick opera house with a seating capacity of 400. The city has an excellent gravity system of water works, a well trained and perfectly equipped fire department, and an arc and incandescent electric light plant.

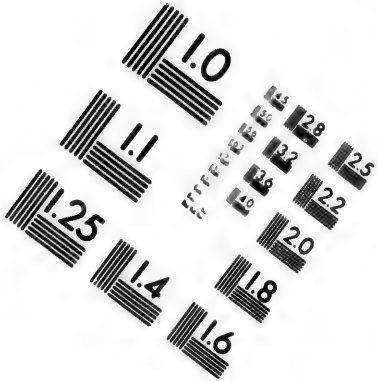
PUBLIC SCHOOL, DAYTON.

BAPTIST CHURCH, DAYTON.

The business interests of Dayton are looked after by an enterprising lot of men. In the city are a number of stores which carry stocks of goods ranging in value from $25,000 to $60,000. Two national banks are located here and the financial institutions do a large business with the city and surrounding country. Dayton also contains one strictly first-class hotel, several smaller hostelries, and a number of good livery stables.

The assessed valuation of all property in Dayton in 1892 was $1,000,000. This has long been regarded as one of the most solid and most prosperous points of East-





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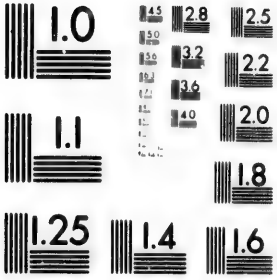

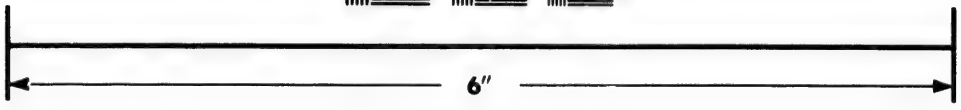

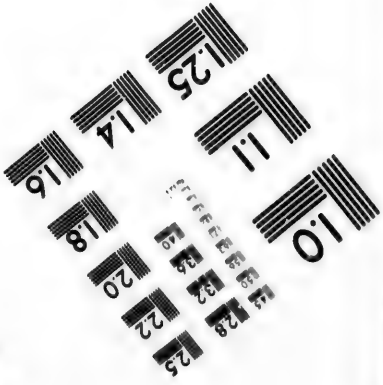

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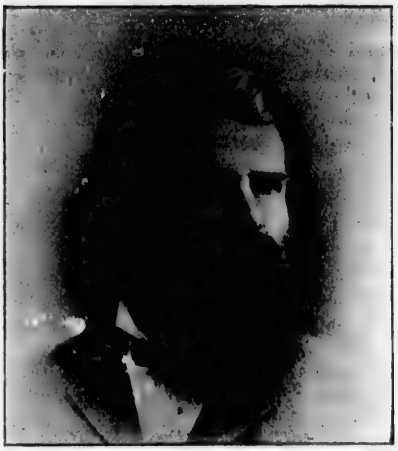
ern Washington, and by virtue of location alone it will always remain the principal distributing center for a large and highly productive farming section.

Dr. M. Pietrzycki, the mayor of Dayton, is one of the most eminent physicians and surgeons in Eastern Washington. Born in Galicia, Austria, in 1843, the doctor obtained his education as an apothecary and chemist in his native country, and came to the United States in 1866. Two years later he received an appointment to the German Hospital in San Francisco, California, soon after which he attended the Pacific [now Cooper] Medical College, from which institution he was graduated in 1872. The following spring Dr. Pietrzycki went to Stockton, California, to engage in the practice of his profession. In 1873 he removed to Rio Vista in Solano county, where he became prominently identified with many enterprises that had for their object the upbuilding of the town and community in which he lived. In 1879 Dr. Pietrzycki removed to Portland, Oregon, and the following year to Dayton, Washington, where he has since resided. The doctor's pronounced success as a physician and surgeon, and his public spirit shown at all times as a citizen, have been manifested in appreciation on the part of the people by his election to anumber of positions of honor. During the raging smallpox epidemic of 1881, which he succeeded in quickly controlling, Dr. Pietryzcki was the health officer for Dayton and Columbia county. Later he was elected president of the Eastern Washington Medical Society, and vice-president of the Washington State Medical Society. Dr. Pietrzycki now holds the honorable position of mayor of Dayton, Washington. He has ever taken a prominent part in the promotion of Dayton's welfare, and is the possessor of a few thousand acres of land in Columbia county employed for agricultural and stock-raising purposes.

PHOTO. BY HESTER.



HON. M. PIETRZYCKI, M. D., DAYTON.

Perhaps the most elegantly furnished offices in Dayton are those of George B. Baker, who is engaged in the real estate, loan, insurance and abstract business. This enterprising gentleman has been located in Dayton for more than 10 years, and

OFFICES, GEO. B. BAKER, DAYTON.

he is conversant with the values of land throughout Columbia county. According to his statement, lands especially adapted to the raising of wheat, fruit or stock can be purchased for from $20 to $50 per acre, the distance of this land from Dayton being from two to six miles. Mr. Baker is considered eminently reliable, and any communications addressed to him concerning the advantages of Columbia county will receive prompt and careful attention. The illustration published in connection with the present article is a correct representation of the elegant offices of Mr. Baker.

Pomeroy, Washington.—Pomeroy, the county seat of Garfield, is situated in the narrow valley of the Pataha, at the end of the Pomeroy branch of the Union Pacific, 322 miles east of Portland. It has a population of about 1,000, and occupying a position near the geographical center of the county, is the trading center and shipping point for one of the greatest wheat-producing centers of Eastern Washington.

Garfield county has an area of about 1,000 square miles, and a population approximating 5,000. Its average annual wheat crop shows the remarkable yield of 2,000,000 bushels. At least three-fourths of the land of the county is adapted to agricultural purposes. The surface is generally hilly, being slightly rolling from Pomeroy on the south, north to the banks of the Snake river. The great water course of the Snake is for 60 miles of its distance the boundary line of Garfield county, which is situated in the extreme southeastern portion of Washington. When the river is opened for unobstructed navigation to the sea by the improvements around the obstructions at the cascades and the dalles, Pomeroy and Garfield county will have a magnificent water outlet to Portland and the Pacific ocean, as it will then be possible for boats to ascend from the sea as far inland as Lewiston, Idaho.

PUBLIC SCHOOL, POMEROY.

That part of Garfield county, which is generally described as mountainous and too rugged for cultivation is admirably adapted for grazing and stock-raising purposes, pursuits that now claim considerable attention from the farmers of this section. As the area of tilled land increases, however, the limits of the stock raiser naturally diminish. Stock raising is fast becoming here, as elsewhere in the west, one of the diversified interests connected with successful farming, and as the sole occupation of a large number of men it does not occupy the position that it did in the early history of the state.

Pomeroy, from its central location and from the prestige it naturally enjoys as the county seat, is an important town of Eastern Washington. It is now enjoying a rapid growth. The municipal authorities have always shown an enterprising spirit in the matter of public improvements. Its fine water-works plant, its perfect system of electric lighting, its well drilled fire department, its fine business blocks and tasty residences stamp Pomeroy as a thriving center of population of the true Western type. Its public schools are up to the standard aimed for in the largest communities. More than 250 scholars are in daily attendance at these schools. Six teachers are employed in these schools, which are graded from the primary to the advanced grammar course. The moral tone of the people is in keeping with the general progress of the place. The Presbyterian, Methodist, Baptist, Episcopal, Congregational and Catholic denominations own church buildings and are liberally supported. Two weekly newspapers, *The East Washingtonian* and *The Washington*

Independent, are published here. Pomeroy boasts of one of the best drilled military companies in the state. The town has a good hall for public gatherings, and all lines of business are well represented. The financial interests of Pomeroy are looked after by two strong local banks. The place has two hotels, and travelers find accommodations here for seeing the country in three well stocked livery stables.

The Pataha valley, in which Pomeroy is located, is about three-fourths of a mile wide and about 40 miles long. It is watered by the Pataha river, which furnishes an abundant power at Pomeroy for operating two large roller-process flouring mills and a planing mill. This valley is to Pomeroy what the Willamete valley is to Portland, and in this little stretch of rich land are found some of the best cultivated farms of the state.

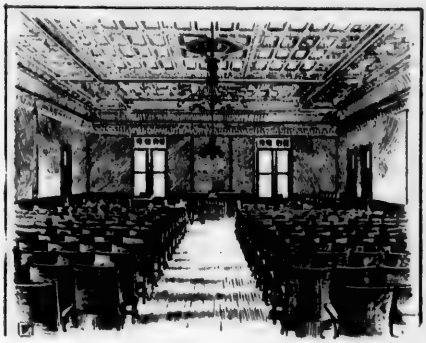
Colfax, Washington.—But a short distance east of the geographical center of Whitman county, which embraces all but a small portion of the rich lands of what is known as the Palouse country, is the prosperous town of Colfax, the county seat. Colfax is located at the confluence of the north and south branches of the Palouse river. It is the trading center of one of the richest sections of country of the coast, and it is today one of the chief commercial centers of Eastern Washington.

Fifteen years ago one small store and two or three small houses occupied the site on which the present flourishing little city is built. Since that time a population of 2,500 people has been built up at this point, the surrounding country has been cut up into rich farms, fine orchards and garden patches, and the city and country surrounding it are in a most prosperous condition. In 1870 Mr. James A. Perkins, a gentleman who has since become prominent in state affairs by reason of the active part he has always taken in advancing its interests, clearly foresaw the advantages of location which a city built at the present site of Colfax must enjoy. With a faith in his judgment, which, coupled with his energy and ability, has since made him one of the wealthy men of Eastern Washington, he settled here, and with the help of others commenced to build a city. Following Mr. Perkins came other able men, many of whom today are prominent leaders in the state's finances and politics, and with the rapid settlement of the surrounding country, which begun about that time, Colfax rapidly grew and prospered, and for many years past it has been a rich center of trade and the chief banking center of the great wheat-producing belt of the Palouse section.

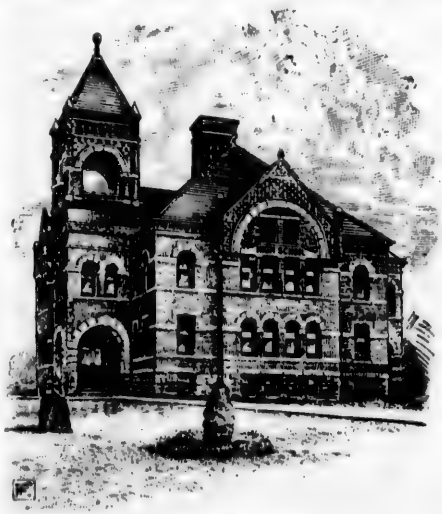
WHITMAN COUNTY COURT HOUSE, COLFAX.

Colfax is confined within narrow limits, the little valley in which it is located being scarcely more than 1,000 feet wide. Rising on either side of this valley are

hills which attain an average elevation of about 200 feet. On top of these elevations stretch away for miles in all directions the rich plateau lands of the Palouse country, lands which have astonished the world with their wonderful productive powers. The main business street of the town is almost one mile in length. Along this street, outside of the business center, are the fine residences of the well-to-do people of Colfax, while the two or three streets on each side of the main thoroughfare are well built up with a substantial class of houses. The general topography of the site which Colfax occupies is such as to allow the erection here of some of the prettiest villa residences in the state. These fine homes occupy high sites reached, however, by easy grades, and they, with the surrounding well-kept yards, form some of the most attractive features of the city. The business blocks are attractive pieces of architecture, and they are well built, brick and stone predominating. The center of the city is compactly built. The buildings of the place, which tower above the other structures, and which are especially worthy of note, owing to their cost and elegance of construction, are the new high school, an elegant piece of architecture, an illustration of which is published in connection with the present article, and which cost $30,000; the Whitman county court house, which was erected at a cost of $173,000, a view of which is also published in "The Handbook;" the Sisters' hospital, which, when completed, will have cost $45,000, and an unfinished hotel building that is to cost about $50,000. Colfax, as before stated, is a wealthy center of trade. It practically holds the best part of the trade of the Palouse section, and it is at this point that the principal banking business and shipping of this rich district is handled. The town is on the main line of the Washington division of the Union Pacific, 394 miles east of Portland, and it is also the terminus of the Moscow branch of the same system. From 1,000,000 to 1,500,000 bushels of wheat are annually shipped from this point, in addition to large shipments of rye, oats, barley and other farm products. Four large warehouses and one grain elevator are located here. That Colfax is a large distributing and supply



INTERIOR, WHITMAN COUNTY COURT HOUSE, COLFAX



HIGH SCHOOL, COLFAX

center is shown by the statement that about $500,000 worth of agricultural implements are annually sold at this point. In addition to the sale of farm implements, the five large general merchandise stores located here enjoy sales aggregating over $500,000 more. Three banks are established at Colfax. These banks have a combined capital of about $400,000, and deposits averaging about the amount of the capital invested. The assessed valuation of taxable property in Colfax is about $1,250,000.

The most important manufacturing industries of Colfax are a roller-process flouring mill with a daily capacity of 75 barrels, and two sawmills whose combined daily capacity is 45,000 feet of lumber. The flouring mill is operated by water power furnished at this point by the Palouse river. It is claimed that at a comparatively small expenditure, the entire volume of water carried by the Palouse river at this point could be used to furnish power for running manufacturing and other industries. This stream at the present time is of the utmost importance to the industrial progress of the city. Over 5,000,000 feet of logs are annually floated down the stream to the mills at Colfax, and the sawing of this timber is a source of considerable revenue to the community.

Colfax has the advantage of good electric lights, which are supplied by two well equipped plants. The place is supplied with an excellent and abundant supply of water by an efficient water-works plant, and the sanitary condition of the city is in the best possible condition. The city's water supply is obtained from a large reservoir, which is located at a sufficient elevation to maintain a strong pressure in the city mains at all times. This with a well drilled fire department, insures protection against fire. The demands for educational opportunities are met by four school buildings in charge of competent teachers. Three of these buildings are used for public school purposes, while the fourth is occupied by a thoroughly equipped college, which is conducted under the patronage of the Baptist church. The elegant new high school building here was completed in 1892, at a cost of $30,000, and it is a credit to the city. The various schools of the city have a daily attendance of about 600 pupils. Colfax supports seven churches, most of which own attractive edifices in which to worship. The denominations represented here are the United Presbyterian, Methodist, Baptist, Congregational, Christian, Episcopal and Catholic.

MARTHA WASHINGTON ROCK, NEAR COLFAX.

Three newspapers are published at Colfax. *The Daily Commoner*, *The Weekly Gazette* and *The Weekly Advocate*, The place is supplied with a number of hotels, which furnish good accommodations. Located here are between 150 and 200 business houses, and an air of prosperity pervades the entire community. Colfax is prosperous because the place relies for support on a country that must always remain prosperous, and if a section that contains one person today, where ten people could easily be supported, makes any advancement, which it certainly must do, Colfax must continue to increase in population and wealth with the growth of this tributary section.

STEPHEN J. CHADWICK.—The present head of the municipal government of Colfax is Stephen J. Chadwick, the present able mayor. Mr. Chadwick is a young attorney, who has already won signal success in his chosen profession. He is the son of Hon. S. F. Chadwick, ex-governor of the state of Oregon. He read law in

the office of his father, and began the practice of his profession at Colfax, in 1885, in partnership with Mark A. Fullerton, with whom he is still associated. Mr. Chadwick has now been mayor of Colfax for two terms, and it has been his constant effort while in office to do all in his power to further his adopted city's interests.

Whitman County, Washington.—Comprised in Whitman county is an area of land consisting of over 2,000 square miles, or 1,280,000 acres. At least seven-eighths of this land is susceptible of cultivation. It comprises a vast variety of soil, all of a rich nature, however, and these lands will produce wonderful large yields of wheat, rye, oats, barley, flax, timothy, alfalfa, all kinds of grasses and garden products, as well as countless varieties of fruits. The barley raised in the Palouse country equals the best Canadian product, which enjoys a world-wide reputation, and thousands of bushels of barley raised here are now annually shipped east for brewing purposes.

Wheat is the great staple product of the county. The yearly product of this crop is from 6,000,000 to 7,000,000 bushels. The county, in addition to the immense quantities of wheat handled here, also annually exports all the staple products raised on the soil of any part of Washington, the principal markets for these products being the Cœur d'Alene mines and points along the line of the Northern Pacific as far east as Helena, Montana.

Whitman is not behind any other county in the state in its fruit products. Apples, pears, plums, prunes, grapes, peaches, nectarines and apricots grow here to the best possible advantage. By careful experiments it has been found that the climate and soil of Whitman county are especially adapted to the successful raising of hops, tobacco and peanuts, products not usually raised successfully in the northern temperate zone. Stock raising (including horses, cattle and sheep, as well as hogs) is one of the staple industries of the farmers of this section. The various kinds of bunchgrass found in inexhaustible quantities on the rolling lands of the county furnish an available and abundant supply of food throughout the year. The farmers of Whitman county own more sheep and export more wool than any other county in the state. The population of the county today is about 30,000, and the assessed valuation is $18,535,460. The county is divided into 143 school districts. It claims 21 banks, 15 flouring mills, and has about 300 miles of self-supporting railroads. Although this is today one of the richest counties of Eastern Washington, there is still room here for the homes of thousands of additional people, and this will at some time in the near future be one of the most thickly settled portions of the West.

Garfield, Washington.—Garfield, in Whitman county, is located at the intersection of the Washington division of the Union Pacific and the Spokane & Palouse branch of the Northern Pacific railroads. It thus enjoys all the advantages of competitive railway rates over rival lines of road for the transportation of the large quantities of wheat which are annually handled at this point. The wheat product of the section of country immediately tributary to Garfield amounts to about 400,000 bushels annually. This country has been rapidly filling up during the past few years, and in the vicinity of the town are some of the largest and best kept farms of the state.

PHOTO. BY DEMOREST.

PUBLIC SCHOOL, GARFIELD.

The population of Garfield is now about 800. The business interests of the place are in a prosperous condition. In addition to a strong local bank, the town contains a number of large general merchandise stores, which carry stocks of goods equal to those carried by many of the large houses of the leading centers of population of the state. In the business center of the town are a number of good brick buildings. The most prominent structure in the town, however, is the public school, which was erected at a cost of about $15,000. The people take much pride in their perfect public school system. The schools are conducted by five teachers and the average daily attendance of scholars is about 200. Garfield contains a roller-process flouring mill with a daily capacity of 50 barrels, and one sash and door factory. During the past year the municipal authorities voted bonds for the erection of a water-works plant to cost $20,000. An electric light plant has recently been completed here and the town is well lighted. *The Garfield Enterprise*, a weekly paper, is published at this point. Church buildings are owned here by the Methodist, Baptist, Christian and Seventh Day Adventist denominations.

The assessed valuation of property in Garfield in 1892 was $300,000. The location of the town in nearly the center of Whitman county and in the heart of the great Palouse wheat-producing belt is unexcelled. The transportation facilities of the town are good. Good roads lead out in all directions and the character of the country is such that it will continue to support an increased population with each succeeding year. This is one of the most interesting parts of Eastern Washington, and the development of the resources of this section will in time make it one of the most prosperous and thickly settled portions of the coast.

Farmington, Washington.—Farmington is a small town with a population of about 500. It is located on the Washington division of the Union Pacific railroad, 28 miles north of Colfax, the county seat, and is also the end of a short branch road of the Spokane & Palouse system, which is operated by the Northern Pacific. The sole dependence of the town for support is on the rich and productive farming country by which it is surrounded.

Located at Farmington is a 75-barrel flouring mill. The town supports two weekly newspapers, *The Journal* and *The Forum*, and a number of large business houses are established here. Four teachers are employed in the public schools, which have an average daily attendance of about 125 scholars. The Congregational, Methodist and Seventh-Day Adventist denominations own church buildings at Farmington. The town has an excellent system of electric lights. One good hotel and two livery stables are maintained here. Farmington is an important shipping point, and several grain warehouses and one elevator are required to handle the large quantities of grain which regularly seek this point for shipment. At one time Farmington was even a more important town than it is today, the completion of the railroad beyond this point having built up a town at Tekoa, some miles east. The country in the vicinity of Farmington, however, is all rich, and the shipment of the products of this section and the regular trade which the district furnishes, will always support a flourishing little town at this site.

Oakesdale, Washington.—But little more than a year ago the town of Oakesdale was visited by a conflagration that wiped out almost the entire business portion of the place. Undaunted enterprise, however, on the part of the leading citizens here has resulted in the erection of substantial brick blocks on the site of the

burned district, and as a result the town today presents an appearance of solidity and prosperity, with a population of 1,200, where before the fire it had that cheapness which a lot of wooden buildings hastily erected always imparts.

The causes which have contributed the most to the rapid growth of Oakesdale during the past few years are, first, the location of the town in a rich section of of farming country; and, second, the perfection of the transportation systems which reach Oakesdale and which allow these products to be hauled to market from this point at reasonable freight rates. About 800,000 bushels of wheat are annually shipped from this point, the product of a rich part of the Palouse grain-producing belt. The town enjoys the advantages afforded by two competing lines of railroad, the Spokane & Palouse branch of the Northern Pacific and the Washington division of the Union Pacific. These lines intersect each other at this point. The distance from Oakesdale to Portland, by the Union Pacific, is 375 miles, and by the same line it is 46 miles to Spokane.

PHOTO. BY P. L. LEMON.

THREE PROMINENT CORNERS · OAKESDALE WASH.

Oakesdale has a large flouring mill, with a capacity of 150 barrels a day, a planing mill, and a foundry and brick plant. The town has a good system of electric lights, and $20,000 in bonds has recently been voted here for city water works. The financial standing of the place is shown by the statement that three banks flourish here. One weekly newspaper, *The Sun*, is published in Oakesdale, and the paper gives evidence of being well supported.

As shown by the illustration published in connection with the present article, Oakesdale has a neatly designed public school building, which was recently erected at a cost of $15,000. The number of scholars daily enrolled in this school is about 250. The school is graded, and is in charge of six teachers assigned to the different departments. A handsome brick church building is owned here by the Presbyterians, while the Methodists and United Brethren also own neat houses of worship at this point. Oakesdale has two hotels, one of which is conducted in a large brick building. The assessed valuation of all property here, in 1892, was $600,000, which can be taken as evidence of the solid wealth of a town that now ranks well with the prosperous inland towns of the state.

PHOTO. BY P. L. LEMON.

PUBLIC SCHOOL, OAKESDALE.

Tekoa, Washington.—Four years ago but one store and a single house occupied the site on which the town of Tekoa now stands. This is today one of the most prosperous little towns in Eastern Washington, and contains a population of about 850. The town is located on the Washington division of the Union Pacific railroad, 433 miles east of Portland and 50 miles south of Spokane. It is also the junction of the Washington division and the Cœur d'Alene branch, of the same road, and is the end of a division on this important system. The roundhouse and car shops of two divi-

sions are located here. The railroad regularly disburses at Tekoa from $8,000 to $10,000 a month. This is one of the most popular towns among railroad men in the state, and a considerable part of the revenue of the town is derived from the money spent here by the railroad employees.

Tekoa is situated in the center of one of the richest portions of the famous Palouse wheat-producing belt. The warehouses and elevator established here regularly handle from 200,000 to 300,000 bushels of wheat a year, which can be taken as evidence of the great productive powers of this section. The growth of the town has all been made since 1890. Almost every line of business is now represented here, and on the main thoroughfare are many fine one and two-story brick buildings. The town supports two strong banks, two weekly newspapers, *The Glove* and *The Blade*, and the leading business houses are on a very strong financial footing. In the matter of public improvements the town has not lagged behind any other town in the state of equal size. The city sold bonds to the amount of $13,000 for water-works and electric lighting purposes. Tekoa now boasts of a perfect water-works and electric light plant. The water for city use is pumped from an artesian well to a reservoir located at a considerable elevation above the town. The town authorities expended $3,000 in the purchase of suitable apparatus for fighting fire, and this with a well-drilled volunteer fire department together with an ample supply of water under a strong pressure, is deemed an ample safeguard against a conflagration in the future at this point.

The educational advantages enjoyed by the youth of Tekoa are considered remarkably good for a town of this size. In addition to the advantages furnished by the $8,000 public school building recently erected here, the enterprise and liberality of the citizens have resulted in the establishment of a large Catholic academy at this point. This latter school is largely attended and well supported. The public school is in charge of four teachers and the average daily attendance is about 200. The Baptist and Congregational denominations own church buildings here. Tekoa has but one hotel.

The country tributary to Tekoa is essentially a wheat-growing section although considerable attention has been paid here of late to fruit culture. The climate in this part of the state is especially favorable for successful fruit growing as is also the character of the soil here. Within two miles of Tekoa are the limits of the Cœur d'Alene Indian reservation. This reservation is occupied by a large, prosperous and wealthy tribe of Indians. These Indians have fallen into the ways of the white man and own large and well-stocked farms, good houses and in many cases even blooded stock and fine carriages. Tekoa is their principal banking and trading point. Tributary to Tekoa is a large part of the rich Cœur d'Alene mining section. A large part of the supplies for these mines is shipped direct from this point, and the trade of this section is an important factor in Tekoa's prosperity. No inland point in the state has made a better showing during the past few years than has been noted in Tekoa and this prosperity is of the solid order which promises much for the future in an increase of wealth and population at this point.

Palouse, Washington.—Palouse, which takes its name from what is probably the most wonderful wheat-producing section of country in the world, is one of the most prosperous inland centers of poulation in the state. Palouse dates its birth from the settlement which was made here in 1873, at which time the site of the present prosperous city was occupied by a single family. Today it contains about 1,700 popu-

A STREET SCENE, PALOUSE.

lation. It has finely graded streets and well laid sidewalks, its buildings are modern in architecture and appointments, and it boasts of modern improvements that would be a credit to a place of much larger population.

In 1888, the business portion of the town was almost entirely wiped out by a fire. Since that time substantial brick and stone buildings have taken the place of the old wooden structures, and the main street for a distance of three or more blocks is now lined with as good a class of buildings as are found in any city of equal size on the coast. Fire limits were established immediately after the fire, and now nothing but brick and stone are allowed in the central part of the city.

Palouse is perfectly sheltered on all sides by towering hills. The sides of these are not too steep to furnish sites for the erection of attractive residences. These residences are in many instances graced with well kept terraces, the surrounding yards are planted in fruit trees, and they are reached by winding approaches, which add to the picturesqueness of the scene. Palouse is situated very much as Colfax is, which is fully described elsewhere in "The Handbook." The town is located in the eastern part of Whitman county, on the banks of the Palouse river, and it is in one of the best portions of the rich Palouse district. It is on the Spokane & Palouse branch of the Northern Pacific. Its nearest large commercial and banking center is Spokane, which is 68 miles to the north. To the west, north and south of the town extend the rich rolling hills of the Palouse wheat belt, while extending for 60 miles away to the east is a great basin varying in width from 5 to 20 miles. This basin terminates at the Cœur d' Alene Mountains, and on the north and south it is enclosed by high ranges of rugged and densely timbered buttes. At the mouth of this basin stands Palouse, its natural supply point. The timber cut along the banks of the Palouse river, which runs through the basin, has made Palouse the principal lumbering center of Eastern Washington. One large lumber mill at this point with a daily capacity of 50,000 feet per day, is kept constantly busy supplying the demand for lumber throughout the Palouse country. In 1892 this mill manufactured more than 10,000,000 feet of lumber and exclusive of those employed in the logging camps back, this industry gave steady employment to more than 100 men.

PUBLIC SCHOOL, PALOUSE.

The Palouse river before reaching the town of the same name is largely increased in volume by a great number of small streams which empty into it. At Palouse a large water power is developed by this stream. This power is utilized at the present time by a flouring mill which has a daily capacity of 75 barrels. There is sufficient power developed here to run a large number of factories, and

LUMBER MANUFACTURING, PALOUSE.

the people here hope to see considerable manufacturing development at no distant date in the future.

Palouse now has a splendid system of water works, sewerage and electric lights. The town is protected against fire by a well-organized volunteer fire department which comprises two hose and hook and ladder companies. Occupying a high eminence overlooking the town is a well arranged public school building which was completed in 1892 at a cost of $20,000. The school here is taught by eight teachers. It is graded up to and including the grammar department. The number of scholars enrolled at the school during the first term of 1893 was 325. In addition to the public school a good Catholic school is also maintained here. This latter educational institution gives instruction in all the common branches as well as in music, painting and drawing.

The religious tone of the community at Palouse is in keeping with the desires of the most devout Christian. The denominations of the Cumberland Presbyterian, Baptist, two Methodist, Episcopal, Church of Christ and Roman Catholic have strong organizations here and own church buildings. The town supports two weekly newspapers, *The News* and *The Republican*. It also contains three banks, two first-class hotels and a number of livery stables. The various mercantile pursuits, trades and professions are well represented here.

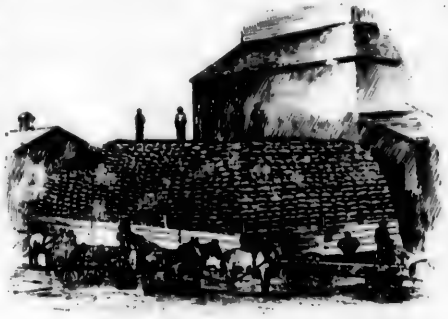
Enough has already been said in "The Handbook" of the great productive powers of the Palouse wheat belt. It is only necessary to add in connection with the present article on the town of Palouse that a vast area of this rich section is directly tributary to Palouse. During 1892 550,000 bushels of wheat were shipped through the warehouses and elevators at Palouse. In addition to grain growing this is a fine fruit country. The climate here is exceedingly healthful, and with rich soil, good transportation facilities and attractive surroundings this is one of the most inviting sections of Eastern Washington.

Pullman, Washington.—One of the most promising towns of Eastern Washington is Pullman, located in one of the best parts of the fertile Palouse district. But little more than three years ago a fierce conflagration swept away the main business portion of the town. Pullman then had a population of not more than 600. Immediately after the fire the growth of the town seemed to receive a fresh impetus, and large one and two-story brick blocks, with many modern city improvements are today the result of a determined spirit shown by the enterprising people at this point.

MAIN STREET, PULLMAN.

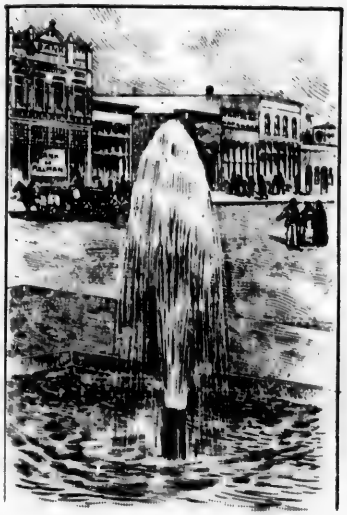
Within less than four years Pullman's population has increased from 600 to 2,000, and evidences of a future growth here are today stronger than they ever were before.

Pullman's location is not far from the geographical center of the famous Palouse wheat belt. Its railroad facilities are probably superior to those of any other point in the Palouse country. The Union Pacific, Spokane & Palouse and Lewiston extension of the Northern Pacific railroad, radiate in four different directions from Pullman. Surrounding Pullman is a beautiful country of many diversified resources, and the soil here is all rich "Palouse" land. Wheat is the chief product of this section, but the farmers here are now coming to realize that there is profit in diversified crops. It was on a farm near Pullman that 101 bushels of wheat were grown on one acre in 1890. Pullman claims to be the largest grain-shipping point in the state of Washington. Here are the statistics of the shipments from this point for 1891: wheat, 1,482,000 bushels; barley, 421,000 bushels; flax, 311,000 bushels; oats, 180,000 bushels. All kinds of fruits and vegetables yield bountiful crops here, and the country surrounding the town is among the richest in the state.



LOADING WHEAT, PULLMAN.

As before stated, the business blocks of Pullman are substantial brick structures, while the residences are tastily designed frame buildings. The town presents a clean and inviting appearance. The improvements of Pullman have been made on a broad and liberal scale, the people having had confidence in the future growth of their town. During the past year a handsome brick city hall and a brick opera house, which will accommodate from 800 to 1,000 people, have been added to the city's improvements. The artesian wells of Pullman, of which there are 11, are less than 100 feet deep, and cost about $500 each. The water-works system owned by the town is supplied from one of these wells, which discharges about 1,000 gallons per minute. The water from these wells possesses medicinal properties, and their free use is recommended for kidney and stomach troubles. Pullman is also provided with electric lights and an efficient fire department. The town supports two banks, which do business on a solid financial basis. Two weekly newspapers, *The Herald* and *The Tribune*, are published at this point. All lines of business are fully represented in the town. Pullman has three good hotels and as many livery stables, and the place is fully as popular with the traveling public as is any town in the state.

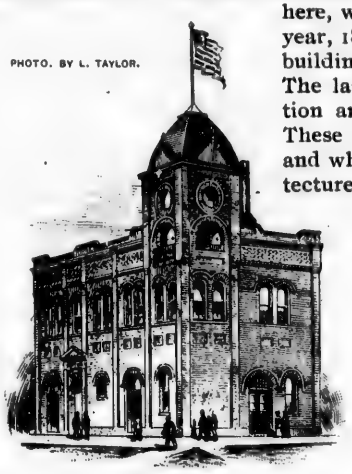


ARTESIAN WELL, PULLMAN.

Pullman has every reason to boast of her educational advantages. The town is, in fact,

the educational center of Eastern Washington. The State Agricultural College and School of Science, the largest endowed institution of the state, located here, was opened in the fall of 1891, and in the following year, 1892, 300 pupils were in attendance. The present buildings occupied by the school are only temporary. The last legislature appropriated $120,000 for the erection and maintenance of permanent buildings here. These fine edifices are now in course of construction, and when finished they will be models of modern architecture. The college is both a national and a state institution. From the government the school is assured the receipts from the sale of 190,000 acres of land, which cannot be sold for less than $10 per acre. The interest from the fund thus created is to be permanently used for the maintenance of the school. In addition to this liberal endowment, the school will receive from the national government $15,000 per annum for experiments in agriculture, and $25,000 for the benefit of mechanical arts and agriculture. The institution is open to both young men and young women. The curriculum and discipline pursued are necessarily up to the standard of the very best institutions of the kind in the United States. The college owns a valuable tract of 220 acres of land at Pullman, which is to be used for farm and garden purposes, lawns and campus. The college buildings are located on a commanding eminence overlooking the city and surrounding country. The endowment and assured income of the college are sufficient to maintain a magnificent equipment for practical experimental work. Tuition and rent are free for all students who are residents of the state.

PHOTO. BY L. TAYLOR.



CITY HALL, PULLMAN.

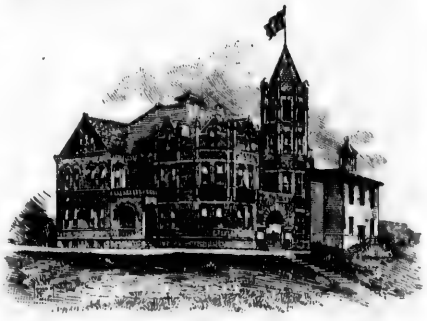
In addition to the state school, Pullman is the seat of a military college. This is a private institution. The discipline at this school is military, while the course of study adopted is similar to that of other colleges.

The public high school of Pullman, erected in 1892, at a cost of $30,000, is one of the best designed structures in the state. A full corps of efficient teachers is employed in the public schools of the city, and the average daily attendance of scholars at the public schools here is 350.

Seven strong religious organizations have neatly constructed churches at Pullman. These are the Presbyterian, Congregational, Christian, Methodist, Baptist, Episcopal and Catholic.

Pullman is situated 85 miles south of Spokane, and 413 miles west of Portland. It has every advantage of location, and is destined to become a city of from 8,000 to

PHOTO. BY L. TAYLOR



PUBLIC SCHOOL, PULLMAN.

10,000 people. Its business men are prosperous and are fully alive to their opportunities for advancement. A notable and praiseworthy feature of the conduct of affairs here is that the citizens work as one man for the upbuilding of their favored city. With all the marks of enterprise noted here, as shown by the many municipal improvements, the entire bonded indebtednes of Pullman does not exceed $30,000, while the assessed valuation of the town is about $800,000. Pullman is one of the most prosperous and progressive towns in Eastern Washington, and its future growth is as fully assured as is its ability to maintain its present important position as the chief commercial center of a very rich section of country.

Colton and Uniontown, Washington, and Genesee, Idaho.—The Spokane and Palouse division of the Northern Pacific intersects the Moscow branch of the Union Pacific at Pullman, and from this latter point it extends southward through a most fertile portion of the Palouse farming country. On the route of the road through this section lie the towns of Colton and Uniontown, in Whitman county, Washington, and Genesee in Latah county, Idaho, the latter point being the terminus of the road.

All of these towns are deserving of more than a passing notice owing to the thrift and enterprise of each. The character of the country traversed by the Spokane & Palouse on this end of the road is similar to that of the Palouse belt in general. The landscape is attractive, the surface being of a general rolling nature and the land here is equally as productive as are any of the best sections of this part of the state. While wheat raising claims the principal part of the attention of the farmers of this section, stock raising is also an important industry here. At Genesee extensive stockyards have been established and large quantities of live stock are annually shipped from this point.

Colton is the first town on the line of the Spokane & Palouse south of Pullman, the distance between the two points being 17 miles. The population of the place is about 500. About 250,000 bushels of wheat are annually shipped from this point. The town supports a weekly newspaper, *The News-Letter*, a small flouring mill and a number of well-conducted business houses are established here. The town also boasts of a fine public school building which cost $10,000. The Catholic church has just completed at Colton a handsome brick convent at a cost of $25,000. The churches represented in the town are the Presbyterian, Methodist and Catholic. The town contains one hotel and two livery stables.

PUBLIC SCHOOL, COLTON.

Uniontown, three miles south of Colton, has about the same population as Colton. The population of Uniontown consists principally of a well-to-do German class of people, as is also that of the country in the immediate vicinity. Uniontown has one bank, two weekly newspapers, *The Washington Journal* and *The Washington Homestead*, the latter being devoted to the interests of farmers and stockmen, All lines of business are well represented here. The town has a brewery with a capacity of 15 barrels a day, which is the sole manufacturing industry of the place. A good system of water works has been constructed here. A new public school building has just been completed at Uniontown at a cost of $7,000. The Catholics have a convent here with a daily attendance of about 125 scholars. The

churches represented are of the Catholic and Congregational orders. The town claims two hotels and an equal number of livery stables.

The annual wheat shipments from Uniontown aggregate about 300,000 bushels. Lewiston and the Snake river country are reached from this point by stage, the distance between Uniontown and Lewiston being 12 miles.

Ten miles south of Uniontown is the town of Genesee, Idaho. This place, as before stated, is the terminus of the railroad. It is the largest of the three towns south of Pullman, on the line of the road, its population being about 800. About 500,000 bushels of wheat are annually shipped from this point, while the live stock shipments from Genesee are greater than they are from either Colton or Uniontown. Genesee has two banks and a weekly newspaper, *The News*. The town has a good system of electric lights. About 200 scholars are in daily attendance at the public schools. The religious organizations at Genesee are the Presbyterian, Methodist, Baptist and Catholic.

In all of the three towns described above are brick blocks, and each town contains a number of attractive residences. All of these places are surrounded by a very rich section of farming country, and the business of each is in a most healthy condition.

Rathdrum, Idaho.—Rathdrum, the seat of justice of Kootenai county, is situated a few miles from the Washington state line in that part of Idaho which, owing to its geographical contrast with the southern portion, is commonly known as the "Panhandle" of Idaho. The town is an important trading station on the main line of the Northern Pacific and is 30 miles east of Spokane. In addition to the large retail business done at this point, Rathdrum enjoys a large trade more or less of a jobbing character with the rich tributary mineral and agricultural country. The place is also a manufacturing town of some importance. Two sawmills are located here, the output of which is consumed in the immediate locality and in the neighboring towns. The largest of these mills is operated by A. W. Post. This mill has a capacity of 10,000 feet of lumber a day, which is shipped to points in the Kootenai country and which also finds a large sale at Rathdrum. Surrounding and near the mill of Mr. Post is a section and a quarter of land which is the property of the owner of the mill. A part of this land is covered with timber from which the mill is supplied, and the balance, comprising about 200 acres, is now in a high state of cultivation. Mr. Post came to Rathdrum in 1882 and he is now serving his fourth term here as justice of the peace.

PHOTO. BY BERTRAND, SPOKANE.

KOOTENAI RIVER, NEAR BONNER'S FERRY.

The land in the vicinity of Rathdrum is very productive and yields large crops of wheat, oats, barley and hay. The growing of small fruits and vegetables for the Spokane market is a remunerative branch of the farming industry of this section. Although the chief dependence of Rathdrum for support at the present time is on the timber and agricultural resources of the country adjacent, it is not improbable that the recent discoveries of gold a few miles distant from this place may result in making this quite an important mining center.

Following the example of nearly all the enterprising cities of the Pacific Coast Rathdrum now possesses an excellent water-works system. The town supports a well-conducted public school, a weekly newspaper, a bank, a large hotel, a brewery and several fine business blocks line the main street. The present population of Rathdrum is about 400. Near this point are numerous small lakes and mountain streams which are well stocked with trout and in the uplands of the immediate vicinity large game is plentiful. During the summer and fall seasons this is one of the most attractive sections of Idaho and tourists will find here one of the best countries for recreation and pleasure on the coast.

Hope, Idaho.—The site which the town of Hope occupies overlooks the broad waters of the beautiful Pend d'Oreille Lake, one of the finest bodies of fresh water on the coast. It is the end of two divisions of the Northern Pacific, the Rocky Mountain and Idaho, and it is at this point that the change from "Mountain" to "Pacific" time is made. The town is located on the main line of the Northern Pacific, 84 miles east of Spokane and 173 miles west of Missoula and it contains today a population of about 500.

VIEW, LAKE PEND D'OREILLE.

At Hope are established large division round houses and repair shops of the Northern Pacific. The railroad company regularly disburses at this point over $25,000 a month. Although the town is typical of railroad life it is in addition a summer resort of considerable prominence. It occupies a terraced site on the north shore of Lake Pend d'Oreille, a magnificent sheet of water 65 miles in length and over 15 miles wide. The lake is encompassed by spurs of the Bitter Root range of mountains. In many places the mountains rise out of the lake itself, the waters washing their perpendicular sides which extend below the surface for unknown depths. Adding to the general beauty of the lake is an irregular shore line which consists of numerous bays and inlets, many of which extend for miles inland from the main body of water. Rising above the surface of the lake are four attractive islands which are great centers of attraction for tourists. Located at different points on the shore line are a number of small villages which are easily reached by a regular line of small steamers plying on the lake and by sail boats. Pend d'Oreille Lake is fed principally by the waters of the Clark's Fork river, which empties into the lake a few miles distant from Hope. The outlet of the lake is the Pend d'Oreille river which finally finds its way to the broad Columbia, the great water-course of the West.

PHOTO. BY MAXWELL.

SCENE ON PEND D' OREILLE RIVER.

Hope is fast growing in popularity as a summer resort. Established at this point are several good hotels and anchored in front of the town during the summer season are a large number of sail and row boats for the accommodation of tourists. In addition to the pleasure afforded by a row or a sail on the placid waters of one of the most attractive of inland bodies of fresh water, this lake is full of trout and other gamy fish. In the mountains back of Hope is plenty of game to attract the attention of the sportsman, and the excitement of a deer or mountain lion hunt in these

fastnesses is hardly equaled by the chase of the tiger in the jungles of the tropics of the old world.

Considerable prospecting is constantly being done in the vicinity of Hope, and valuable mineral discoveries have already been made in the Black Tail and Lake View districts, which are located from 15 to 20 miles to the south. The ores found in these districts are principally galena, carbonates, pyrites of copper and black sulphides. Assays of these have shown as high as 787 ounces of silver to the ton. It is the general belief among practical mining men who have carefully examined into the merits of these mines that the general averages of the ores found and the width of the veins and ledges will warrant mining operations being carried on here on an extensive scale with profit, in the near future.

DR. TALLEYRAND MARTIN, HOPE.

The citizens and business men of Hope are enterprising and they take a deep interest in all matters tending to promote the welfare of their town. One of the most prominent and most highly respected men of Hope is Dr. Talleyrand Martin, who is now engaged in conducting a drug store here, in addition to which he is interested in several other enterprises. Dr. Martin was born in Cayuga county, New York, September 2, 1821. On reaching manhood he went to Ohio, where he graduated from the Cleveland College in the class of 1848. He resided in the East for some years after that time, when he moved West, finally settling in Hope in 1888. The ancestors of Dr. Martin came to America in 1635, and their descendents have figured conspicuously in the history of the United States.

The Cœur d'Alene Country, Idaho.—Lying among high and rugged mountain ranges, broken here and there by narrow valleys and deep canyons through which flow foaming mountain streams, is the famous Cœur d'Alene country of Northern Idaho, with its numerous mining camps and its vast stores of precious metals.

This famous mineral region comprises that part of Shoshone county lying west of the Bitter Root Mountains and north of the range which separates the St. Joseph from the Cœur d'Alene river and extending as far east as the line of Kootenai county. The district is heavily timbered, being covered with pine, tamarack and cedar, and it is crossed by numerous mountain streams which afford unlimited water power for running the machinery of any number of mining and lumbering plants that might be located here.

While the old Mullan road, built in the early 60's, leads through the heart of the Cœur d'Alenes, and passess within a stone's throw of the present town of Wardner, the heart of the silver-producing district, no people were attracted to this section until the discovery of gold on the North Fork of Cœur d'Alene river in the fall of

LAKE CŒUR D'ALENE.

1882. Prior to that time thousands of people had passed through the Cœur d'Alenes over the famous Mullan road referred to above. This great military highway running from Fort Benton, at the head of navigation on the Missouri river, to Fort Walla Walla, in Washington, traversed almost the entire length of the Cœur d'Alene country. The pioneers who followed this pathway to the West did not prospect the country they crossed, and for many years it remained an unexplored and uninhabited wilderness.

In the fall of 1882 a venturesome miner, seeking for placer diggings, on his way over the Bitter Root range of mountains, discovered pay dirt in the heart of the Cœur d'Alenes. This man was A. J. Pritchard, who first discovered gold in this region, and it was on the creek which now bears his name that he first found pay dirt. It requires at times but a wild and exaggerated rumor to work up a mining excitement, and the winter following the discovery of gold here by Pritchard witnessed a stampede to the vicinity of Pritchard creek that was only equaled by the rush of gold seekers to the California gold fields in 1848 and 1849. Notwithstanding the fact that the leading trails into the Cœur d'Alenes were covered with 20 feet of snow, hundreds of men walked into the promised new eldorado during that winter. As a result of this foolish stampede there was much suffering in camp during the winter. Some died of hunger and cold, and even the men possessed of money could not at all times purchase either a meal or a bed in the camp. The country contained plenty of gold, but the mines have required capital and much labor to work them. The first stampede to the Cœur d'Alenes was a failure, the winter following the rush the country was practically deserted, and it remained for the discoveries of a later period to establish its wealth.

After the main body of men had departed a few experienced miners carefully prospected the hills in the vicinity of the deserted camp for gold prospects. Among these was John Cartin, who, in the spring of 1884, discovered a vein of rich galena ore near where the town of Wallace now stands. He subsequently sold this location for $35,000. This is now the famous Tiger mine, valued at about $1,000,000. Other rich discoveries were made here and a few years after the first rush, the Cœur d'Alenes again began to attract the attention of the world as a promising field for future mining operations. Towns sprung up all over the district. With the town of Murray on one side of the divide, where the rich gold properties were located, and the towns of Wallace and Wardner on the other side, the seat of the great silver belt, the country soon began to be the seat of the greatest mining activity. Capital flowed in freely from the East, the new mines were opened, railroad lines projected and built, and the country entered on an era of prosperity which finally resulted in making it one of the greatest mining camps of the West.

One of the later of the big discoveries in the Cœur d'Alenes was that of the rich Bunker Hill and Sullivan mines. This last discovery was of such magnitude and richness as to awaken the interest of Montana capitalists in the country. As a result, a few rich men of Montana constructed a narrow-gauge railroad from Mission Landing, at the head of navigation on the Cœur d'Alene river, to Wardner, which had been built up near the rich properties of the Bunker Hill and Sullivan. In 1887 the Bunker Hill and Sullivan properties were sold to Portland capitalists and these mines and other rich properties in the vicinity soon became the seat of the most active operations in the Cœur d'Alene district.

The Cœur d'Alene district is divided into a gold, and a silver and lead-producing belt. The gold belt is situated in that portion of the country traversed by the North

fork of the Cœur d'Alene river and its tributaries, Eagle, Pritchard and Beaver creeks, and it extends east to the range of the Bitter Root Mountains. There are extensive placer deposits in these gulches through which flow the above named streams. The mountains on either side of the gulches are covered with deposits of gravel, which in some instances reach a depth of 130 feet. This gravel is known locally as "old wash." It probably formed the beds of prehistoric river channels. It is rich in placer gold, but it is difficult and expensive to work owing to its elevation and the necessity of constructing long flumes and ditches to get water to it. Water has been brought to work these gravel deposits by several rich companies and hydraulic mining is now successfully carried on in this region. Since the first discovery of gold here in 1882, the placer mines of the Cœur d'Alenes have yielded $2,500,000 in gold.

STEAMER GEORGIE OAKES, LAKE CŒUR D'ALENE.

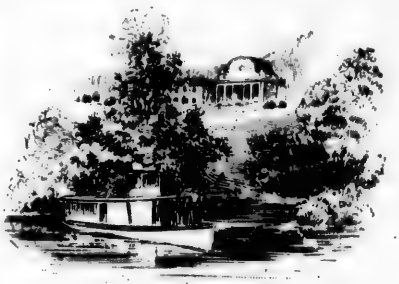
In the gold belt of the Cœur d'Alenes are many valuable quartz gold mines, some of which have been extensively worked. There are now three stamp mills and several arastras engaged in crushing and treating the ores from these mines. It is estimated that quartz properties here annually produce $150,000 in gold bullion. This output would be largely increased if the district had the advantages of transportation by rail, which are now denied the mine owners of this section. A project is now being considered for connecting the gold belt of the Cœur d'Alenes with one of the transcontinental lines of road by rail, and when this is accomplished many rich gold properties now lying idle in this section will become very productive mines.

Lying south of the gold belt in the Cœur d'Alenes, and principally on the south fork of the Cœur d'Alene river and its tributaries, are the great developed silver and lead-producing mines of the Cœur d'Alenes. The principal mines of the silver belt are the Bunker Hill and Sullivan, Last Chance, Tiger, Poorman, Badger, Gem, Custer, Black Bear, Morning, Granite, Sierra Nevada and Stemwinder. There are 11 concentrators connected with these mines, of an average capacity each of 100 tons a day. The daily output of the mines, when being worked, is estimated at 298 tons of concentrates. The Bunker Hill and Sullivan lead with a daily output of 65 tons, the Poorman follows with 45 tons, with the Badger third on the list with a daily output of 35 tons. The smallest producer of the silver properties is the Black Bear, which turns out but 5 tons of concentrates a day. The average yield from the ore of these mines is about 30 ounces in silver and 60 per cent lead per ton of concentrates. This would make the daily output of the mines here about 8,940 ounces of silver and 357,600 pounds of lead. When in operation these mines furnish employment to 3,000 men. The average wages paid these men run about $3 per day, making the daily payroll of these properties foot up to about $9,000, or an annual outlay for wages of about $3,000,000.

The above statistics apply to mines when in operation. At this writing, owing to the depression in the price of silver and lead, all the mines of the Cœur d'Alenes producing these metals are lying idle. During 1892 the mines of the Cœur d'Alenes produced 11,000 ounces of gold, worth $237,390, and 1,195,904 ounces of silver, with a coinage value of $1,546,184. During that year labor troubles caused a large reduction in the output of silver and lead in this district. In July, 1892, several men were killed by striking miners, and one mill and concentrator were destroyed by giant powder. The mine owners of the Cœur d'Alenes appealed to the federal government for pro-

tection, and martial law was established and continued in force until the middle of November of the same year. In the conflict the striking miners were victorious, and they remained at work until the mines were closed by the owners in the summer of 1893.

Those operating the mines of the Cœur d'Alenes have experienced many drawbacks, and they have had many obstacles to overcome. First of these troubles was the inaccessibility of the district, which was remedied, however, at a later period by the construction of the two lines of the Union and Northern Pacific railroads through this section. Then followed several disastrous conflicts between the miners and the mine owners. The trouble finally culminated in silver reaching a price at which its mining was no longer profitable. There are few, if any, greater silver and lead-producing districts in the world than is that of the Cœur d'Alenes. The future of this region depends entirely upon the value lead and silver may attain. With silver at 83 cents and lead at $3.80, the mines of the Cœur d'Alenes can be operated without loss. These prices, however, would leave no margin of profit to the owners of mines of average grade, mines in which the silver runs from 27 to 29 ounces per ton and the lead averages 57 per cent. At the prices and averages named above, after deducting the usual 10 per cent on lead and 5 per cent on silver for loss in treatment, the silver per ton would be worth $21 and the lead $39, thus making the total value of a ton of the concentrates $60. The freight and smelter charges per ton will average about $26. This leaves a balance of $34 per ton for the mine owner, except when the concentrates run more than 10 per cent in zinc. From this $34 the mine owner must meet all working expenses of the mine, including wages, interest on capital invested and loss caused by breakage. It can thus readily be seen that operating the great silver-producing properties of the Cœur d'Alenes is not a profitable industry at the present low price of silver in the markets of the world.



OLD MISSION LANDING, CŒUR D'ALENE RIVER.

The Cœur d'Alene district, apart from its mineral-producing possibilites, is a sportsman's paradise. The streams here abound in the gamiest of fish and the mountains are full of game. In the hills, remote from the settlements of the district, are countless numbers of deer and bear that have never heard the report of a gun. In any of the swift-flowing streams here the casting of a fly brings numerous speckled trout to the surface. This country is much frequented by pleasure seekers during the summer and fall months, and it is gradually becoming one of the most popular resorts of the West.

Two railroads now run parallel with each other through the center of the Cœur d'Alene country. A branch of the Union Pacific leaves the Washington division at Tekoa and runs through the Cœur d'Alenes as far as Mullan. The Northern Pacific cuts clear through the district, the initial points of this road being Missoula and Spokane. All of this route is by rail except a short stretch of 50 miles on Cœur d'Alene Lake which is crossed by steamer. After leaving the main line at Missoula, the Northern Pacific runs its branch to the old Jesuit mission on the Cœur d'Alene

river. From the latter point boats run down the stream seven miles to the lake of the same name, and thence 47 miles to the town of Cœur d'Alene, where connection is made by cars for Spokane.

The whole Cœur d'Alene district is of the picturesque order. Along the railroads running through this section are foaming rivers, precipitous and overhanging cliffs, deep and dark canyons, high forest-covered mountains and narrow valleys. It is in these mountain-enclosed valleys, with scarcely sufficient area for a broad street, that the towns of the district are located. The principal towns of the section are Wardner, Wallace, Murray, Burke, Gem, Osborne and Mullan. After leaving the last of these towns, Wardner, the traveler journeying westward through the Cœur d'Alenes reaches Mission Landing, where still stands the old mission church erected by the Jesuit Fathers many years ago. Near this point the wild and romantic grandeur of the mountains is broken by a charming vista of forest-inclosed river and a mountain-walled lake.

FORT SHERMAN AND LAKE CŒUR D'ALENE.

Cœur d'Alene Lake is one of the most beautiful and picturesque sheets of water in the Northwest. It is 60 miles long and of an average width of but two and one-half miles. It is surrounded by low wooded hills which gradually rise in height until, in the background, mountains 8,000 or 9,000 feet greet the eye. The scenery all along this lake is of the grandest order. Two important streams empty into this lake. These are the St. Joseph and Cœur d'Alene rivers. The latter is navigable for a distance of seven miles above its mouth. The St. Joseph river is navigable for a much greater distance. It runs through a beautiful farming country and taps a splendid timber district.

The Cœur d'Alene Indian reservation borders the lake for several miles. It embraces a large area of the richest farming land, and is occupied by one of the most intelligent and most advanced Indian tribes of the continent. At the foot of the lake is located Fort Sherman, garrisoned with about 400 soldiers. Near Fort Sherman and 30 miles distant by rail from Spokane is located the attractive little city of Cœur d' Alene. The country surrounding this beautiful alpine lake is remarkable in its diversity of contour, its beauty and its grandeur. The rugged mountain peaks that lie far beyond the gently sloping hills that enclose the limpid waters of the lake are divided by enormous canyons thousands of feet deep. The country is one that appeals with irresistible force to one of a romantic nature, and it is justly regarded by tourists as one of the most attractive parts of the United States.

Wardner, Idaho.—Wardner is a picturesque mining town occupying a site extending along Milo gulch for a distance of nearly two miles. The town commences at the point where the gulch opens into the South fork of the Cœur d'Alene river, and ends near the famous Bunker Hill and Sullivan mines, two of the best known properties of the Cœur d'Alene mining district.

It was the discovery of these two mines in 1886 that led to the establishment of a town at Wardner. The main street of the town runs along what was once an old trail leading up the center of the gulch and it is on this thoroughfare that nearly all

the buildings of Wardner are erected. In the narrow gulch which the town occupies there is barely room for a single street. Some of the houses are perched high up on the side of the mountain, which slopes down to a point near the center of the main street.

The population of Wardner is about 1,000. It is 101 miles east of Spokane and 145 miles west of Missoula. It is reached by the lines of the Union Pacific and the Northern Pacific railroads. The features of Wardner that attract attention are its school houses, its churches, its fine electric light plant and water-works system, weekly newspaper, its good hotels and its large retail stores.

BUNKER HILL AND SULLIVAN MINES, WARDNER.

In the vicinity of Wardner are five large, developed mines and a hundred or more prospects which are tributary to it. The greatest of these mines are the Bunker Hill and Sullivan, two of the largest silver and lead-producers in the United States. These mines are located on the sides of the gulch in which the town is situated, one on either side of the gulch. The concentrator of these mines has a capacity of 700 tons per day. The ore is conveyed from the mines to the concentrator a distance of nearly three miles, by means of iron buckets suspended from a cable. The other four large mines of Wardner are all good producers of rich silver-galena ore when in operation. These are the Last Chance, with a concentrator which has a daily capacity of 150 tons, the Stemwinder, with a 100-ton concentrator, the Tyler and the Sierra Nevada.

Wallace, Idaho.—Wallace is located in a beautiful valley at the junction of the Canyon, Nine Mile and Placer creeks, with the South fork of the Cœur d'Alene river.

Five narrow and deep canyons here open into the small and level valley which is occupied by the townsite. It is up these canyons that some of the great silver and lead mines of the Cœur d'Alenes are located. Wallace is located on the Cœur d'Alene branch of the Northern Pacific. Between this point and Mission Landing on the Cœur d'Alene river the company operates a narrow-gauge railroad. The distance between Wallace and Mission is 25 miles. Boats connect with the cars at Mission for Cœur d'Alene City, from which latter point cars run to Spokane. Wallace is also a station on the Mullan branch of the Union Pacific. Both of these lines parallel each other touching at nearly all the camps of the silver and lead-producing belt. Branches of both roads leave the main lines at Wallace and run to Burke and Gem.

VIEW OF WALLACE.

The population of Wallace is about 1,200. It contains a number of handsome residences and substantial brick business blocks. The streets are wide, are lined with good sidewalks and are lighted by electricity. A supply of pure, mountain water is

CHURCH, WALLACE.

conveyed in pipes to the town from the neighboring creeks. Fire hydrants are conveniently located on the main streets, and a volunteer fire department equipped with good apparatus guarantees the town against fire. The Methodist and Episcopal denominations have houses of worship here. The school facilities of Wallace are of the first order, there being established here two well conducted and largely attended public schools.

A feature of Wallace is the Providence Miners' Union Hospital, which occupies a large three-story brick structure with a handsome mansard roof. The future of Wallace, like that of other mining camps of the Cœur d'Alenes, wholly depends on the price of silver and lead. With silver at 90 cents and lead $4 the mines here can be profitably worked. Near Wallace are a number of mines that have already added hundreds of thousands of dollars to the wealth of the nation. Among these mines is the Granite, owned by a Portland syndicate. The output of this mine averages $23,000 per month when the price of silver is above 90 cents. Seven miles northeast of Wallace is the Custer, another rich mine. The ore from this mine is conveyed by cable tramway to a 200-ton concentrator located three miles south of the mine shaft. This property is supplied with the best of machinery and during its palmy days yielded large regular returns to its owners. In Nine Mile Canyon near Wallace is a a group of claims consisting of the Black Cloud, California, Monarch and Panhandle, all of which would under favorable conditions become dividend-paying mines.

Burke, Idaho.—Burke is located on Canyon creek, eight miles north of Wallace. It is reached from the latter place by spurs of the Union Pacific and Northern Pacific railroads. The population of the town is about 700. It has a good hotel, water works, fire department and a public school.

TIGER MINE, BURKE.

Immediately surrounding Burke is a rich mineralized area, very little of which has been explored or developed. Burke owes its birth to the discovery near this point of the now famous Tiger and Poorman mines. In 1883-'84 a stampede took place to the placer fields of the North fork of the Cœur d'Alene river. The miners, on arriving at their destination, found that the richness of these fields did not reach their expectations, and as a result many of the early comers left the country at once. Among those who remained was John Carten, an old Montana miner, who knew the value of a good prospect when he saw it. On his prospecting tours he reached farther out into the mountains than the other prospectors, and in the spring of 1884 he discovered a vein of rich galena ore on Canyon creek. This was the first location of a quartz ledge in the Cœur d'Alenes. Carten subsequently sold his discovery here for $35,000, and it is now known as the Tiger mine.

It cost $200,000 to open the Tiger mine and erect a concentrator on the property. All of this money was expended before a ton of ore was shipped from the mine. The concentrator here has a daily capacity of 130 tons. The mine produces 35 tons of concentrates a day, which average 39 ounces in silver and 30 per cent. lead.

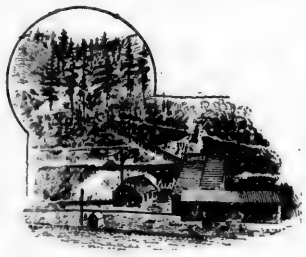
The Poorman mine was located soon after the discovery of the Tiger. A large sum was also expended in developing the former mine and in equipping it with machinery and in building a concentrator on the property. The daily output of this mine is 45 tons of concentrates. This ore is of the same average richness as is that of the Tiger. These two mines are among the best producing properties of the Cœur d'Alenes and the town of Burke is practically supported from their operation.

POORMAN MINE, BURKE.

Osborne, Idaho.—Osborne is an attractive little town of the Cœur d'Alenes, and is located on the South Fork of the Cœur d'Alene river. It is 107 miles east of Spokane and 139 miles west of Missoula by the line of the Cœur d'Alene branch of the Northern Pacific. It is also a station on the Mullan branch of the Union Pacific. The town contains a population of about 300. It is the diverging point from the railroad for the stage line connecting with Murray, in the heart of the gold belt.

Osborne has an excellent system of public schools for a place of its size, a church and several handsome residences. The townsite occupies 320 acres. The town is practically mountain-enclosed. Like every important town of the Cœur d'Alenes, Osborne is the center of a rich mineral district. The three large mines here are the Mineral Point, St. Elmo and Killbuck, all of which adjoin each other on the same ledge on Mount Perenthesis. Other claims near Osborne, all of which are silver and lead properties, are the Nellie, Knickerbocker, Daisy, Comet and War Eagle.

Gem, Idaho.—Located in Canyon creek, four miles from Wallace, is the town of Gem, one of the most important mining camps of the Cœur d'Alenes. Like all the towns of this section, Gem is located in a narrow valley surrounded by high mountains, far up on the sides of which, and overlooking the town hundreds of feet below, are the houses of the Gem and other rich mines here.



GEM MINE AND CONCENTRATOR, GEM.

Gem is reached by the Northern Pacific and Union Pacific railroads. Its population now is about 500. The mines located in the immediate vicinity of Gem are the San Francisco, Granite, Black Bear, the Gem, and the Formosa group. These mines when in operation furnish employment to over 300 men and they have a capacity of 80 tons of concentrates a day. Concentrators have been built on the Gem, Granite and San Francisco mines. The ore from these mines averages 30 ounces in silver and 50 per cent lead to the ton. It is by the operation of these mines that the town of Gem depends wholly for existence. When the mines here are shut down the camp is practically deserted. When the mines are in full operation, however, this is one of the most active and most prosperous towns of the Cœur d'Alene district

Mullan, Idaho.—This important mining center of the Cœur d'Alenes is located on the Cœur d'Alene branch of the Northern Pacific, 112 miles east of Spokane, and 128 miles west of Missoula. It is also the terminus of the Mullan branch of the Union Pacific.

Nature has not only deposited enormous mineral wealth in the immediate vicinity of Mullan, but it has made the site of the town a romantic and attractive location. The town is built on the south fork of the Cœur d'Alene river, in a small valley of less than 40 acres in extent. Surrounding this valley are high and rugged peaks presenting almost every phase of wild mountain scenery. The little town of 500 people is the one bright spot in the center of the green rock-studded mountains that surround it.

Mullan was settled in 1884, and it was named in honor of that intrepid and talented pioneer, John Mullan, the builder of the great Mullan road through this section. Mullan is a progressive town. It contains a $3,000 school house, a handsome Catholic cathedral, and a well constructed town hall. The lines of industry of the town are represented by a sawmill, a shingle plant and a planing mill. The water for use in the town is conveyed from a mountain stream by a flume to a reservoir located 257 feet above the streets of the town. The gravity pressure of this water in the hydrants is sufficient to throw a stream to considerable more than cover any building in the place. This, with a well drilled volunteer fire department here, is an absolute safeguard against fire. Mullan is lighted by about 350 incandescent lamps.

In the immediate vicinity of Mullan is the Chloride Hill group of mines. This group consists of the Morning, Evening and Night Grouse, Gettysburg, You Like, Lucretia, Independence and other valuable properties. Among the other promising mines and claims near the town are the Little Giant group on Silver creek, the Central on Boulder gulch, the Paymaster, Keno, Jersey, Little Chip and Bullion on Hunter gulch, the Daisy, Missoula and Black Diamond. The two largest and best known mines here are the Gold Hunter and the Morning. The Gold Hunter was discovered by J. D. Hunter, in 1885. The mining district around Mullan is known as the Hunter district, named in honor of the discoverer of the Gold Hunter. The Gold Hunter is now owned by St. Paul capitalists. It has a daily output of about 100 tons of ore. The concentrator connected with this mine has a daily capacity of 100 tons per day.

The Morning mine here was purchased for $12,000, and it is now valued at $1,000,000. It is one of the best developed mines in the Cœur d'Alenes. The concentrator of this mine has a daily capacity of 100 tons.

The You Like is another good mine on which a large body of rich ore has been uncovered. It is operated by a stock company with a capital of $1,000,000. All the mines of this district are of average grade and yield about 30 ounces in silver and 58 per cent lead to the ton of concentrates.

Murray, Idaho.—Situated in a narrow valley, in the heart of the gold belt of the Cœur d'Alenes, is the town of Murray, the seat of justice of Shoshone county. Six miles from Murray, Pritchard creek, on which it is built, forms a junction with the north fork of the Cœur d'Alene river. It was at this point that A. J. Pritchard first discovered gold in the Cœur d'Alenes, in 1882. Since the country was first opened to settlement Murray has remained the chief town and supply point for the "North End," a term designating the gold districts bordering on Pritchard and Beaver creeks and their tributaries. Murray, at the present time, is without railroad connection. It is reached by stage from Osborne, a station on the Union and Northern Pacific, 18 miles to the south. The lack of transportation facilities has been a serious impediment to the development of the many rich quartz mines in the vicinity

of Murray. For this reason the exceptionally rich gold district of Bald Mountain, at the head of Eagle creek, has never been worked. In 1893 hundreds of miners, who had been thrown out of employment by the closing down of the silver-producing properties of the Cœur d'Alenes turned their attention to placer mining along Pritchard creek and its tributaries. These men made good wages at this work, thus demonstrating the richness of the district. Pritchard creek empties into the North Fork about two miles above the mouth of Beaver creek. It runs for about 13 miles through the gulch containing the placer deposits which first attracted attention to the Cœur d'Alenes. The mountains on either side of this and other gulches are covered with what is called "old wash," being heavy deposits of gravel in which large quantities of gold are found. This "wash" was either a prehistoric river bed or the track of a moraine. As great a depth of gravel as 150 feet has been found here. Over $2,500,000 in gold has already been taken from this ground by labor on the rimrock and shallow gravel by parties of men working with primitive implements. The attention of capital and labor is now being largely directed toward Murray district, and the waters of the neighboring lakes and rivers are being conducted to such points along this "old wash" as will allow the placer ground here to be fully tested and developed. It was not until then that a successful attempt was made to reach bedrock of these gravel deposits which are recognized by all mining men to be exceedingly rich in gold. A syndicate of capitalists is now working this ground with the latest hydraulic appliances and after the most approved methods of placer mining. One company has constructed an extensive bedrock flume along one of the sides of Eagle creek, which is a tributary of Pritchard. Another company has under consideration the building of a bedrock flume eight miles in length along the main channel of Pritchard creek. These and other enterprises now under way have done much to make Murray a prosperous and important mining town.

MOTHER LODE MILL, MURRAY.

The town of Murray itself is an attractive place, surrounded by romantic mountain scenery. It is built in a gulch, from which steep timber-covered mountains rise to a height of over 3,000 feet. One principal street runs through the town, on which the business houses front. The remainder of the narrow valley here in which the town is built is occupied by residences, some of which are crowded well up on the mountain side. Like other progressive mining camps, Murray possesses excellent school facilities, several churches, and good hotel accommodations. It now claims a population of about 1,200. The discovery of the placer mines here was followed later by the finding of lodes from which the gold originally came. There are now several good paying quartz mines in the vicinity of Murray. One of the best known of these is the Mother Lode, on which a 10-stamp mill has been located. This mine has already produced about $275,000. Other good properties here are the Golden Chest, with a 10-stamp mill, the Golden King, also with a 10-stamp mill, the Idaho, with a 20-stamp mill, and the Fay Templeton, with a 25-foot Huntington mill.

The Buckeye group of mines, at the head of Dream gulch, are paying gold producers, as are the Occident and Treasure Box, adjoining the Mother Lode. It now requires large capital to work the placer mines of Murray district, as water in great

quantities for working the deposits here has to be brought from great distances. The Cœur d'Alene Mining Company are working the placers of Fancy gulch, near Murray. Their water is conveyed to the gravel deposits, by ditch and flume, for 11 miles, a fall of 80 feet being obtained. In Dream gulch, the Spokane Hydraulic Pipe Company have expended over $250,000 in grounds and improvements. Eight miles of 16-inch pipe are used to convey the water to their grounds, which yield an average of 37 cents per cubic yard from surface to bedrock. The increased activity in gold mining here, in 1893, which resulted from the depression in the silver districts of the Cœur d'Alenes, is exerting a powerful influence in Murray's advancement. The town is today one of the important mining centers of Idaho, and the attraction of capital to the rich gold district of which it is the base of operations, is an assurance of the permanence and prosperous future of the camp.

Moscow, Idaho.—Owing to its favorable location at the west end of Paradise valley, Moscow has been frequently styled the "City of Paradise," a term that anyone who has ever visited the town will admit is aptly chosen. Approaching this sightly city by either of the parallel lines of railroad, the Union Pacific or the Northern Pacific, the traveler is at once struck with the beauty of Moscow's location and also by the imposing appearance which the city itself presents as a whole. Many new and towering brick blocks rise above the lower structures of the city and the place has every aspect of a solidly built and prosperous center of trade.

MAIN STREET, MOSCOW, LOOKING NORTH FROM FOURTH

Although Moscow's population at the present writing is barely 3,500, the first impression of the stranger visiting the city, is that the place is much larger. This is owing to the unusual size of some of the buildings here which are seldom found in a city of Moscow's population.

Thirteen years ago Moscow was a mere trading point and as late as 1889 the population of the place hardly exceeded 1,000. The rapid growth of the city since that time has not been attended by a boom. It was a natural result of the development of this portion of the Palouse country in the most fertile portion of which Moscow is located, and the building to this point of two important lines of railroad, the Spokane & Palouse branch of the Northern Pacific, and the branch of the Union Pacific, which now connects with the main line of the Washington division at Colfax. Moscow is the terminus of the Union Pacific branch, while the Spokane & Palouse extends beyond this point south for 31 miles to Juliaetta. Between Juliaetta and Lewiston the line for the extension of this road is almost all graded, a distance of 25 miles. Lewiston is the head of navigation on the Snake river, and it has long been one of the most important cities of Northern Idaho. When the line shall be completed clear through to Lewiston, a large extent of the richest country in the state will be opened to settlement, and as this country is developed it will do a large part of its trading with Moscow.

HIGH SCHOOL, MOSCOW.

The town of Moscow, although young, is already a rich center of population. Its assessed valuation is now placed at about $1,500,000. It boasts of three retail and job-

bing stores, each of which occupies quarters covering a full block of land. These stores carry stocks of goods valued at from $100,000 to $200,000 each. No less than four banks are doing business here on a solid basis. The city has nine warehouses and two elevators, while the average annual wheat receipts here aggregate from 1,000,000 to 1,500,000 bushels. In addition to wheat there is yearly handled at this point 50,000 bushels of flax seed and 40,000 bushels of barley.

Among the public improvements noted at Moscow is a fine system of water works that cost $45,000. The water, furnished by artesian wells, is pumped into a standpipe which is located on an elevation 75 feet above the main street and is 80 feet in height. The mains extending throughout the city are six inches in diameter. Hydrants are located at the principal street corners and the pressure is sufficiently strong in these mains to throw water over the highest buildings of the city. The city has an excellent fire department, an arc and incandescent electric light system, and has all the modern improvements ever found in a place of this size.

PUBLIC SCHOOL, MOSCOW.

Moscow is the seat of justice of Latah county. A block of ground has already been appropriated for a court house here, and a building for county purposes has been erected on this ground at a cost of $25,000. Moscow's educational advantages are unsurpassed. The new state university is located here. An illustration of this building, together with an article descriptive of it, is published in connection with the present article. There are two public school buildings in the city, one of which is a frame structure which cost $12,000, and the other is a brick high school the erection of which involved an outlay of $30,000. An excellent system of grades has been adopted in these schools, and a competent corps of teachers is constantly employed here. The average daily attendance of scholars at the public schools of the city is 800.

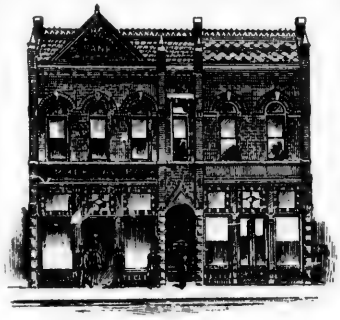
EPISCOPAL CHURCH, MOSCOW.

Moscow has a number of fine church edifices. The denominations represented are the Presbyterian, Baptist, two Methodist, Christian, Congregational, Episcopal, Catholic, Seventh Day Adventist and Dunkards. A strong organization of the Young Men's Christian Association is maintained here. The press is also well represented in the three weekly publications, *The North Idaho Star*, *The Democrat* and *The Mirror*. Moscow is well supplied with hotel accommodations, having a new $30,000 hotel building and three other good hotel structures.

Moscow impresses one as possessing more of a metropolitan appearance than perhaps any other city of equal size in the Pacific Northwest. Its moral and social features are in striking contrast to what is usually found or expected in cities of equal population. It is a good business point, as is demonstrated by the fact that three large and successful jobbing houses are established here. The territory that is necessarily tributary is vast in extent, and the trade of this fertile section is rapidly increasing. Moscow is already the largest city in Northern Idaho, and it gives promise of leading in population among the cities of the state within the next few years.

HON. I. C. HATTABAUGH.—The Commercial Bank, of Moscow, was organized in 1889, with a capital of $50,000. Its surplus and undivided profits are now $20,000. The bank has paid a semi-annual dividend of 6 per cent ever since its establish-

ment. The officers are I. C. Hattabaugh, president, George Langdon, vice-president, and I. A. Funk, cashier. The president of the Commercial Bank, Hon. I. C. Hattabaugh, is a representative and prominent citizen of Moscow, inasmuch as there are but few undertakings of public enterprise here with which he has not been conspicuously identified. Mr. Hattabaugh was born in Indiana in 1851, and he received a high school education. He is a democrat in politics and enjoys the distinction of being the only one of his party elected to office, that of county treasurer, at the last state election. Latah county is strongly republican, but Mr. Hattabaugh ran ahead of his ticket 500 votes. Mr. Hattabaugh is a member of the board of regents of the State University. He is grand master of the Masonic order of Idaho, and he is prominently identified with several business enterprises of Moscow whose success has been largely due to his sagacious efforts.



COMMERCIAL BANK, MOSCOW.

R. S. BROWNE.—The Moscow National Bank was organized in 1891 with a capital stock of $75,000. Its officers are R. S. Browne, president; J. H. Maguire, vice-president; C. S. Scott, Cashier; and C. M. Browne, assistant cashier. Mr. Browne, the president, is one of the shrewdest financiers of the Northwest, and he has been offered at various times positions with some of the strongest banks in the city of Portland, Oregon. Mr. Browne was born in Portland, Michigan, in 1862, where he received his education in the high schools. Twelve years ago he came to Moscow and identified himself with the well-known firm of McConnell & Maguire. Afterwards he accepted a position as cashier of the First National Bank of Moscow, and later was instrumental in organizing the Moscow National and Savings Bank, of which institution he is now president. Mr. Browne has been treasurer of Latah county for three terms and he now holds the office of treasurer of the regents of the University of Idaho.

R. S. BROWNE, PRESIDENT MOSCOW NATIONAL BANK.

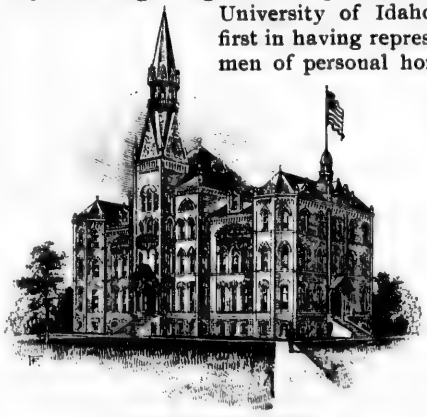
W. W. WATKINS.—There is perhaps no more prominent man in Moscow than Dr. W. W. Watkins. He has earned the distinction among his fellow citizens of being foremost in almost every stroke of public enterprise that requires some one to lead. Dr. Watkins is a native of New Hampshire, having been born in that state in 1846. He received his literary and medical education in the city of St. Louis, where he took his last degree in the study of medicine in 1872. He practiced in St. Louis until recent years, when he came to Moscow, where he has attained marked prominence as a physician and surgeon. Notwithstanding the arduous toil necessarily entailed by a successful physician, Dr. Watkins has always found time outside his practice to spend *pro bono publico*. He is an ardent republican and was chairman of the first state convention held in Idaho. He is president of the Moscow chamber of com-

merce and is secretary and member of the board of regents of the Idaho State University. Dr. Watkins is a prominent Knight Templar and is a member of the Odd Fellows. He has accumulated considerable property in both Idaho and California, an evidence of the success which has always attended his practice as a physician.

W. W. WATKINS, M. D., MOSCOW.
SECRETARY BOARD OF REGENTS, UNIVERSITY OF IDAHO.

THE UNIVERSITY OF IDAHO.—For a young state to repeat the mistakes of its elders is inexcusable. Many states, yielding to sectional clamor, have materially and permanently weakened their educational powers by trying to maintain several so-called institutions for higher education. Such schools necessarily become ill-fed pensioners upon the public bounty. They are purely local and consequently poorly patronized, disappointing local expectations both as to their value in a commercial sense and their rank as institutions of learning.

Idaho has wisely chosen to concentrate its support of higher education upon its university, with the hope of making it a school of commanding influence, an expectation that present appearances fully justify, for no institution ever made a more auspicious beginning or more quickly won popular confidence and support. The University of Idaho has been peculiarly fortunate from the first in having representative men of the state upon the regency, men of personal honor and business methods to manage its affairs and to shape its destiny. It is the unwritten but effectual law of the state that political subserviency and religious emulations must not enter into the management of the university. So we find the governor of the state making his biennial appointments of regents solely in the interests of the university.



UNIVERSITY OF IDAHO, MOSCOW.

Hon. Willis Sweet, M. C., was the first president of the board of regents, resigning on account of his public duties in favor of Philip Tillinghast, Esq., whose training in Columbia College and professional experience admirably qualify him for the position. W. W. Watkins, M. D., the efficient secretary of the board, is a man of tireless activity and unbounded devotion to the institution. The other regents, I. C. Hattabaugh, Moscow, C. W. Shaff, M. D., Lewiston, J. F. Ailshie, Grangeville, Sherman M. Coffin, Caldwell, H. H. Hoff, Montpelier, A. A. Crane, Harrison, and A. J. Crook, Clayton, are their worthy co-workers.

The University was opened to students October 3, 1892, with a faculty consisting of the president, F. B. Gault, and one professor. A year later the institution had 12 professors and instructors. Here again the regents showed complete freedom from

personal and political interests by canvassing the country for the best possible qualified men and women for teachers. It takes teachers to make a school, a fact that is often overlooked. These professors have graduated from the leading colleges of this country, some of them adding foreign study and travel to their preparation. Beginning without equipment of any kind, the libraries, laboratories and other facilities are now worth over $10,000, and well selected additions are being made constantly.

The main university building is one of the finest college buildings in the country. It is built of brick, the interior finish being in California redwood. Being four stories in height, in length 180 feet and in width 122 feet, the building contains about 50 bright, cheerful rooms, admirably adapted to school purposes. It is heated by steam, lighted by electricity, and supplied with artesian water. Toilets, lavatories, cloak rooms and all the improvements and conveniences that characterize modern public buildings are supplied.

A choice of five collegiate courses of study is already offered students. These courses, which will be enlarged in scope as circumstances permit are the classical, the scientific, the civil engineering, the agricultural and the English, the latter embracing courses in political, financial, ethical and sociological sciences and designed especially for teachers, business men and those preparing for public life. While it is the intention to give thorough classical training, the institution will make its courses in the English classics, the sciences and those subjects pertaining to the industries of life and the public questions of the day particularly strong and inviting.

The university is located in a dry climate at an altitude a little less than 3,000 feet. The climate is an agreeable relief from the arid regions and the higher altitudes and from the humid climate along the Pacific coast. There is no climate in the world more conducive to effective study. If Idaho shall wisely maintain its present policy as to higher education, the University of Idaho is destined to become one of the leading schools of the great West.

Kendrick, Idaho.—The distance from Moscow to Kendrick, which is situated in Latah county, is 26 miles by the line of the Spokane & Palouse branch of the Northern Pacific. This road extends for a distance of four miles beyond Kendrick to Juliaetta, a small town of perhaps 250 people. A part of the route between Moscow and Kendrick, possibly ten or more miles, lies through a narrow defile or canyon along the watercourse known as Potlatch creek. It is in this canyon that the town of Kendrick is located. The stranger visiting this point for the first time is led to inquire, on what can a town located here be supported? On either side of Kendrick rise sharp hills to an elevation of about 1,500 feet. Outside of the railroad route the place is seemingly inaccessible and yet the condition of the business enjoyed by the town shows this to be one of the most prosperous points of the state.

PUBLIC SCHOOL, KENDRICK.

An easy ride over one of the numerous winding highways which reach the top of the hills back of Kendrick is the best educator on the subject of Kendrick's prosperity. As far as the eye can reach from the summits of these hills stretch away the rich lands and well kept farms of the district which pours all its wealth into the coffers of its principal trading center, Kendrick. This land is gently rolling as is all of the good wheat land of Eastern Washington, and it comprises one of the most fertile

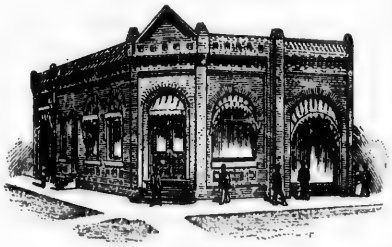
sections of the coast. This land when properly cultivated yields from 30 to 60 bushels of wheat to the acre, and in this district are situated fine farms, well kept orchards and it is occupied by a well-to-do and progressive set of farmers. In plain view of the summits of the hills back of Kendrick is the Nez Perces Indian reservation, only six miles distant from Kendrick. This reservation comprises fine lands, its total area being about 500,000 square acres. Those who are thoroughly acquainted with the wonderful productiveness of the soil of the Potlatch district of which Kendrick is the trading and banking center, look forward with considerable interest to the time when the lands of this reservation will be thrown open to settlement. It is hoped that this will be done within the next two years. The opening of this reservation would largely increase the general prosperity of the entire section tributary to Kendrick and it would also insure a greater degree of importance to the town itself than this place now enjoys.

No less than six "ridges" or narrow strips of agricultural land, separated by canyons, converge at Kendrick. Good county roads connect the town with all these outlying districts. The names applied to these several "ridges" are the Potlatch, Cedar creek, Texas, Big Bear, Little Bear and American. The soil of all the lands on these "ridges" is noted for its wonderful fertility and it will produce all the cereals and fruits such as peaches, apples, pears, plums, quinces, prunes, cherries and smaller fruits in great abundance. It is estimated that at least 1,500 square miles of land is tributary to Kendrick and the character of this tributary section is such that its trade can never go to any other point but Kendrick. In addition to this, Kendrick is also the nearest trading point for the Boulder, Ruby and Cedar mining districts. The section tributary to this town is also rich in timber, and within 20 miles of the place are hundreds of acres of valuable white pine, which is yet practically untouched.

Kendrick's location is a strong one. The merchants here have no fears of a rival town springing up at a near point, and the trade that comes here cannot well go anywhere else. The trade of the place being in the staple lines of an agricultural community where crops never fail, the people here do not suffer from the financial depressions which with annoying regularity worry the banks and business men of other less favored localities. The town of Kendrick is today less than four years old. Two years ago the place was almost entirely wiped out of existence by a fire, and its growth has practically been compassed within the two years past. It now contains about 700 people, and is substantially and handsomely built up. Several good business blocks line the main street, and the merchants here carry large and well assorted stocks of goods. The town has the benefit of good water works, a fine electric light plant and supports a weekly newspaper, *The Gazette.* Two Methodist, one Presbyterian and one United Brethren churches are established at Kendrick. The town has the advantage of excellent public schools and the many public improvements which have been made here are in keeping with the progressive policy of the citizens who have built a town at this point.

Kendrick now contains a flouring mill, with a daily capacity of 50 barrels, and three grain warehouses. During the past year (1893), the shipments of wheat from this point amounted to about 500,000 bushels. The Spokane & Palouse railroad line which was completed to this point in 1891, has given a great impetus to the growth of the rich section of country in which Kendrick is located and it is this railroad which is responsible for a large part of the prosperity which the town now enjoys.

THE FIRST NATIONAL BANK.—The First National Bank of Kendrick was organized in August, 1892, with a capital stock of $50,000. Its undivided profits now exceed $6,000. The officers of the bank are F. N. Gilbert, president, A. T. Gilbert, vice-president, Matthew Jacobs, cashier, and A. W. Gordon, assistant cashier. The First National Bank, through the financial prominence of its stockholders and the conservatism of the cashier, Mr. Jacobs, has won the confidence of a long list of depositors since the date of its organization, and is now on the strongest of financial footings and is justly popular with its customers.



FIRST NATIONAL BANK, KENDRICK.

HOTEL ST. ELMO.—The Hotel St. Elmo is a new and practically fire-proof two-story brick hotel. It contains 32 neatly furnished rooms, all of which are lighted by electricity. It is the only hotel in Kendrick and is conducted on a strictly first-class plan. M. C. Normoyle is the proprietor and he is a hotel man of long experience. Guests at this hotel are conveyed to and from trains and they receive the most courteous attention while stopping at this popular house.

HOTEL ST. ELMO, KENDRICK.

POTTER & COUTTS.—The well-known firm of Potter & Coutts are authority on all matters pertaining to real estate, loans, insurance, investments and collections in the country tributary to Kendrick. This firm has now been engaged in business in Kendrick for three years. Mr. Potter, the senior member, is one of the original owners of the townsite of Kendrick. Mr. Coutts, the junior member, is an attorney at law. All communications addressed to this reliable firm will receive prompt attention.

E. S. CRUMBAKER.—Mr. E. S. Crumbaker is an attorney at law and gives special attention to collections and real estate as well as investments and insurance. Mr. Crumbaker will be glad to reply to all inquiries concerning Kendrick of whatever nature.

Lewiston, Idaho.—The history of Lewiston, the capital of Nez Perces county, Idaho, dates back as far as 1860, or to the time when gold discoveries were first made in the Oro Fino and Florence districts 80 miles to the east. By the latter part of May, 1862, it is claimed that 20,000 people had flocked to the scenes of these early mining operations and the yield of gold from these diggings was reported at $7,000,000. Lewiston owes its location to the fact that it is at the head of navigation on the Snake river, and it was from this point that the thousands of early gold hunters who had come up the river from the coast found their chief outfitting station.

NEZ PERCES COUNTY COURT HOUSE, LEWISTON.

During the early days of her existence, Lewiston enjoyed a remarkably rapid growth, though perhaps a little of the mushroom order. During the height of the gold excitement in Northern Idaho the town boasted of a population of fully 10,000. Today, Lewiston contains scarcely more than 1,500 people, and yet it is now one of the prosperous and solid towns of the northern part of the state. It is the wealthiest town in proportion to population in the state. The assessed valuation here shows real estate valued at $750,000. This is conceded to be about one-third the actual value of the property assessed. The 300 voters of Lewiston, perhaps, make up the majority of land owners here. The assessment rolls accredit $2,500 worth of taxable property to each of these voters, property that, at its actual valuation, is conceded to be worth $7,500. Lewiston challenges the world for a parallel statement. The people here are all prosperous and happy and, without the aid of railroad connection, Lewiston is conceded to be one of the richest inland cities of the coast.

Lewiston is located at the confluence of the Snake and Clearwater rivers, each of which streams carries a sufficient volume of water to float large steamers. A regular line of steamboats operates on the Snake river between Lewiston and Riparia, connection being made with the Union Pacific railroad at the latter point. The elevation of Lewiston is but 700 feet above sea level, while rising on all sides of the town are plateaus of the richest farming land of a general altitude of from 2,000 to 4,000 feet. The winters of Lewiston are not cold, the thermometer seldom dropping here below zero, while the summers are not uncomfortably hot.

The soil of the lands adjacent and tributary to Lewiston is excellent in quality. It is deep and, without the aid of irrigation, yields large crops of cereals and grasses. In certain parts of the country tributary to Lewiston crops during seasons of protracted drought have suffered, but it is claimed by those who have given the subject the most careful attention here that irrigation can easily be provided for these arid belts at a small expense. The valley lands in the vicinity of Lewiston are especially adapted to fruit raising. These lands produce with the most lavish abundance almost every variety of deciduous fruits. The climate and soil combine here to make fruit raising a very profitable industry. The grapes, peaches, apricots and melons of the Snake River valley are famous, while apples, pears, prunes, cherries and all the smaller fruits grow as well here as on any part of the coast. Grapes yield as high on these lands as six tons to the acre, while the peach crop never fails, and the quality of the peaches raised here vies with that of the finest peach crops of New Jersey.

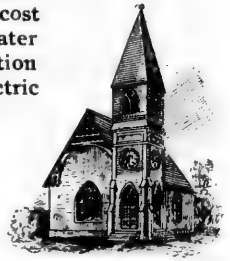
PUBLIC SCHOOL, LEWISTON.

The transportation problem is one which the people of Lewiston have vainly attempted to solve for many years past. A tri-weekly steamer now runs between Lewiston and Riparia, a six-hours' ride down the river, where close connection is made with the Union Pacific railroad, on the through line betwen Portland and Spokane. Two daily stage lines, one of which is run to connect with the Northern Pacific trains, make the trip from Lewiston to Uniontown, a station on the line of

the Northern Pacific, 12 miles distant. It is probable, however, that Lewiston will enjoy railroad communication with the outer world at an early day in the future. The Northern Pacific has already built to Juliaetta, in the Potlatch district, a point within 25 miles of Lewiston. The citizens of Lewiston have raised a cash bonus of $75,000, to be paid to the Northern Pacific on condition that the road be completed to Lewiston by January of the present year. The roadbed is partially graded, but owing to the prevailing stringency in the money market during the past year, the Northern Pacific was unable to earn the subsidy. The time will probably be extended, however, and although the road is now in the hands of a receiver, the short connection between Juliaetta may be finished during the present year.

FIRST M. E. CHURCH, LEWISTON.

Lewiston is solidly built. The main street is graced with a number of two and three story brick blocks. Main street, the principal business thoroughfare, is broad and well kept. It is fully two miles long, and beyond the business section of the city is lined with handsome residences with ample and well kept surrounding yards. The street is well shaded on either side with the Lombardy silver poplars. Lewiston contains two national banks, which are on the strongest of financial footings. A complete system of water works, which cost $100,000, is owned by citizens of the town. The supply of water here is inexhaustible, and the pressure is ample for protection against fire. Lewiston has a good fire department and an electric light system. Among the manufacturing industries of the city may be mentioned a patent roller-process flouring mill, a brewery, two saw mills, a planing mill and machine works. Other important factors that contribute to Lewiston's prosperity, are two daily stage lines to Uniontown, one daily stage line to Camas prairie, and stages daily to Moscow, Genesee, Asotin and Pomeroy, and a tri-weekly line to the Potlatch country. A department of the United States land office, for the counties of Nez Perces, Idaho and Latah, is also established at this point. Lewiston also boasts of a branch of the supreme court of the state. The town is the distributing center for a large area of rich country, and it is the headquarters for the immense logging interests which annually handle large drives of logs on the Clearwater river.



EPISCOPAL CHURCH, LEWISTON.

Lewiston is justly proud of her excellent educational advantages. The public schools are of the first order in their appointments. The average attendance at the public schools of the city is about 200. The last session of the Idaho state legislature designated Lewiston as the place where the State Normal School should be located. The state endowed this institution with the revenue to be derived from 50,000 acres of land. The buildings for the normal school here will be erected during the present year. The St. Aloysius Academy, a Catholic institution, was first opened to students in the fall of 1883. The attendance at this school has steadily increased each year since it was first opened. Lewiston boasts of some very handsome church edifices, among which may be mentioned the First Methodist, the Methodist Episcopal South, the Episcopal, Presbyterian and Catholic.

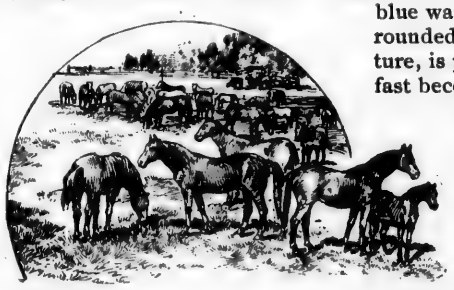
Lewiston supports two good weekly newspapers, *The Teller* and *The Tribune* it has two hotels and two livery stables.

The following figures, obtained from the United States land office at Lewiston, will furnish satisfactory information of the amount of land tributary to this town. In Nez Perces county there have been surveyed: fruit and garden lands, 20,000 acres; grain land, 40,000 acres; grazing land, 54,945 acres, making a total of surveyed land in the county of 114,945 acres. In addition to this there are in the county 350,000 acres of unsurveyed grazing lands. On Craig's Mountain there have been surveyed 75,000 acres of grain and timothy lands, and 125,000 acres of grazing lands on the mountain are still unsurveyed. On Nez Perces Indian Reservation, in Nez Perces county, there are 385,000 acres of agricultural, timber and grazing lands, making a grand total of 1,049,945 acres of land which can be considered tributary to this town.

PRESBYTERIAN CHURCH, LEWISTON.

Grangeville and Camas Prairie.—Idaho county occupies a central position in the state of the same name. It reaches from the boundary line of Oregon on the west to the dividing line between Idaho and Montana on the east, a distance of about 200 miles, while the length of the county from north to south is about the same, the shape of the county being nearly square. While the surface of a large portion of Idaho county is rugged and mountainous, yet the largest body of agricultural land in the state lying in one piece is found in Idaho county. This fertile belt is what is known as Camas prairie. It is with this remarkable section of land that the present article has to deal.

Camas prairie can be reached at the present time only by stage from Lewiston, which is located in Nez Perces county, on the Snake river. A few miles above Lewiston is the mouth of Salmon river. The Lewiston and Grangeville stage line extends in a southeasterly direction from Lewiston, running between the Salmon and Clearwater rivers. Forty miles above Lewiston the stage crosses the dividing line between Nez Perces and Idaho counties. For one-half of this distance the road crosses a country of low elevation and prairie-like character, a greater portion of the land of which is now under cultivation. At the boundary line of Idaho county the foot of Craig's Mountain is reached. This elevation is ascended by a circuitous though not a precipitous county roadway. Near the summit Lake Waha, a crystal sheet of blue water abounding in gamy fish and surrounded by the most picturesque charms of nature, is passed. The shores of this lake are fast becoming a popular summer resort for the people of the surrounding country. The summit of Craig's Mountain is reached from the lake by easy grades. On top of the mountain are a few miles of very easy traveling, through fields of hay and waving fields of grain, over prairie and table-lands. This is the great plateau of the summit. The first view of Camas prairie from any part of the stage route is obtained when Cottonwood butte is reached on



STOCK SCENE, CAMAS PRAIRIE.

the descent of the eastern slope of Craig's Mountain. It is safe to venture the assertion that the traveler who has arrived at this point for the first time will unconsciously pause and meditate for some moments on the grandeur of the landscape that is suddenly presented to his view here. The scene from Cottonwood butte is truly an inspiring one. Spread before the beholder is a section of country 30 miles in length and about 20 miles wide. On a clear day these thousands of acres of gently undulating land, dotted here and there with settlements, and on which large bands of horses and cattle are contentedly feeding, with their waving fields of wheat, oats, barley, flax or timothy, form a panorama that is more entrancing than is the greatest painting of the master artist. To the south from this point are seen the snow-capped peaks of the Salmon River Mountains, and towering still above these lofty elevations are the sawtooth eminences of the Seven Devils. Far to the east are the lofty heights of the Bitter Root Range, which merges into the Cœur d'Alene Mountains on the north and which joins Craig's Mountain on the west. This magnificent circle of mountains is unbroken with the exception of easy passes here and there which will in the near future furnish open gateways for the entry of railroad lines to Camas prairie, one of the most fertile sections of the West.

As before stated, Camas prairie is about 30 miles long and about 20 miles in width. It lies between the Salmon and Clearwater rivers, streams which parallel each other, the Salmon river running on the south and the Clearwater on the north and east. The distance between these streams at the point where they come closest to each other is 30 miles. These rivers flow through deep canyons. The Camas prairie is reached from these water-courses by following the courses of the several creeks which find their source along the foothills of the mountains back and which empty into the larger streams below.

The topography of Camas prairie is best described as being of a gently rolling character. The bedrock below the soil is basalt of volcanic origin, while the surface above this is a deep, black loam of the same character as is found on the best lands of the famous Palouse wheat belt of Washington. This soil produces remarkable yields of all kinds of cereals and grasses, fruits and vegetables. Camas prairie is well watered by the Cottonwood, Three Mile, Butcher and John's creeks, which flow through it and empty into the Clearwater and Grave creeks and the waters of Rocky canyon, which flow into Salmon river. A bountiful supply of well water is obtained on the prairie in almost any locality at depths varying from 10 to 60 feet. The altitude of Camas prairie is about 3,000 feet above sea level. The climate of this part of the state is by no means severe. Frosts seldom appear here before December, and the snowfalls during the winter months are not heavy and snow seldom remains on the ground here longer than a week at a time. The warm chinook winds blowing up from the southwest and the currents of warm air which rises from the river canyons below tend to greatly temper the rigors of winter on Camas prairie.

The population of Camas prairie at the present time does not exceed 4,000. Owing to lack of railroad connection with the outside world, the farmers here now give their attention principally to stock raising, although sufficient products of agriculture are raised to amply meet the local demands. The sale of surplus stock in this section is annually increasing and it now averages yearly about $100,000 in value.

The mineral resources of Idaho county are worthy of more than passing notice in the present article, owing to the proximity and accessibility of these mineral

deposits to Camas prairie. The excitement attending the discovery of the placer gold-fields of Oro Fino, Elk City, Florence and Warrens diggings here in the early 60's will be remembered by many of the old residents of the Northwest. Although placer mining is now on the decline, recent valuable quartz discoveries in these same districts and the active preparation already made for their development promise a greater activity in mining in these districts than was noted 30 years ago. In the Warrens district several valuable gold-quartz ledges are now being worked at a profit, although at something of a disadvantage owing to the lack of wagon roads and the consequent heavy cost of hauling supplies to the mines. A state wagon road has just been completed at a cost of $50,000, which will reach these mines. This road is about ready to be opened to travel and it will undoubtedly give a great impetus to the working of the valuable quartz mines of Idaho county.

A very rich section of Idaho county is the Alton mining district. It is noted for its rich ledges and it only awaits the building of wagon roads to become a very prominent mining section. The Elk City district lies in the foothills of the Bitter Root Mountains and is regarded by experts as being remarkably rich in surface display. A road to this district is assured during the present year (1894). The completion of this road will give Camas prairie means of communication with one of the most promising mineral belts of the Pacific coast. The famous Seven Devils mines are copper properties. Active preparations are now being made to develop these mines on a large scale.

The timber resources of Idaho county are apparently inexhaustible. The western slope of the Bitter Root Mountains alone is covered with a dense growth of pine, fir, tamarack and cedar. This timber belt is about 100x80 miles in extent. The forests here are easily accessible and they contain sufficient timber to meet the demands of this section for many years in the future.

The towns of Camas prairie will always remain the principal supply points for all the vast mineral and timber sections of country back of this belt of rich agricultural land. Camas prairie is the only body of agricultural land between Lewiston prairies and the mining districts of Montana and it is also the only fertile belt separating the great mineral section of Northern and Southern Idaho. The prevailing cheapness of land in this prairie at the present time will undoubtedly attract a large immigration to this part of the state during the present year. The finest ranches, all under fence and with the usual farm improvements can yet be bought here for from $10 to $20 an acre. Wild and unimproved lands on the prairie find a ready sale at from $5 to $8 an acre. Three years ago these lands could have been purchased at less than one-half their present selling price and three years hence it is not unreasonable to expect that they will as readily bring twice the amount they are today being sold for. The population of Camas prairie is rapidly increasing and immediate prospects of railroad connection with the outside world promise quite a boom for this section in the near future. There is now but little desirable government land on Camas prairie.

The soil of Camas prairie is a black loam varying in thickness from a few inches to several feet. The subsoil is clay and is about 18 inches in depth. The land here produces a fine bunchgrass which is self-curing and very nutritious. Cattle and horses range on the natural pasturage almost during the entire year without attention. Some of the finest breeds of cattle and the best grades of horses are raised on Camas prairie. The surplus stock is rounded up every spring and fall and is driven to Lew-

iston or Genesee, distant about 65 miles, and shipped from these points by the Union or Northern Pacific railroads to different parts of Oregon, Washington or Idaho. Large bands of horses are frequently bunched and driven to Montana or Dakota where they command prices ranging from $15 a head for cayuses to $300 a span for blooded mares. The principal crop now raised on Camas prairie is timothy. The cereals do well here, wheat averaging from 30 to 60 bushels to the acre, oats 50 to 75 bushels and barley 60 bushels.

Adjoining Camas prairie on the north and east is the Nez Perces Indian reservation, which contains 765,000 acres of land. At least three-fourths of this land is susceptible of a high state of cultivation. There are today about 1,800 Indians in the Nez Perces tribe which is recognized as one of the most prosperous, industrious and intelligent of the primitive American race. The Indians here have already received their allotments of land in severalty. The remaining lands of the reservation, comprising about 500,000 acres, will soon be thrown open to settlement by congress. This land is among the finest in the Northwest. The people of Camas prairie, as well as others interested in the development of this part of the state, are urging congress to speedy action in the matter of appropriating this land, and it is hoped that the national government will take some action on this matter during the present session of congress. A large portion of the reservation is directly tributary to Camas prairie. It lies directly between Camas prairie and Snake river. It is felt that the opening of the lands of this reservation to settlement will alone insure Camas prairie speedy railroad connection. Both the Northern and the Union Pacific have already made surveys for extending their lines into the Camas prairie country. The Spokane & Palouse branch of the Northern Pacific will probably be completed from Juliaetta to Lewiston during the present year, and it is expected that the line will be extended from that point to Camas prairie. The Union Pacific has run surveys from Lewiston via Camas prairie to a connection with the main line in the southern portion of the state. It is hardly probable that one of the most inviting sections of the state will long be denied railroad connection with the outside world, and with the advent of the iron horse Camas prairie will become one of the most prosperous sections of the West.

Grangeville, Idaho.—Grangeville is the largest center of population on Camas prairie, the town claiming today about 500 people. It is favorably situated, being near the center of the prairie from east to west, and not far from the foothills of the Bitter Root range of mountains to the south. Its proximity to the mountains makes its a particularly healthful location, and a most desirable place in which to reside.

MAIN STREET, GRANGEVILLE, JULY 4, 1891.

Grangeville has always enjoyed a marked degree of prosperity. Its three large general merchandise stores do an annual business of at least $250,000. Two solid banks and various small bus-

iness houses are located at this point. In addition to having a large country trade, Grangeville is the present supply and outfitting point for the rich mines in the vicinity. In manufacturing industries the town has a large roller-process flouring mill and a brewery. A large sawmill is located two miles distant from the town. The social and moral tone of the community of Grangeville is of a very high order. The Methodist and Episcopal denominations have church buildings and strong organizations here. A Chatauqua circle, brass band, and a company of Idaho National Guards, which is one of the best drilled military organizations in the state, the Patrons of Husbandry, who own a fine hall here, are notable features of the life of the town. A well conducted high school and an academy, under the patronage of the Methodist church, are an indication of the demands which exist here for the best educational facilities. Grangeville supports one of the best conducted weekly newspapers in Idaho. This is *The Idaho County Free Press*, edited and conducted by A. F. Parker, who is doing much to advertise the resources of the Camas prairie country. East of Grangeville 1½ miles is located the government experimental station, one of three of the kind assigned to the state. The government has purchased here 160 acres of land which has been set apart for experiments in agriculture. Appropriate buildings for this purpose have already been erected here and scientific men have been employed to conduct experiments along the lines above specified.

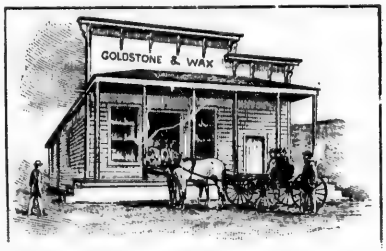
Grangeville was first started as a town in 1874. It has steadily advanced in wealth and population since that time until it has become a most important center of trade for the Camas prairie country and for the mines of the districts adjacent. The business men of Grangeville are thoroughly alive to every advantage which their promising city enjoys, and they are united in all efforts to further the city's interests. The citizens of Grangeville are public spirited and they fully appreciate the fact that the development of the Camas prairie country insures the building up of their city, which is now the chief commercial center of this rich district. It has been through this ambition of the people here which is largely responsible for the prestige Grangeville now enjoys. Among the more enterprising citizens of the city may be mentioned W. W. Brown, the successful manager of the Bank of Camas Prairie; A. F. Parker, editor of *The Free Press;* Messrs. Alexander & Freidenrich, Henry Wax, Messrs. Vollmer & Scott, the proprietors of the three large general merchandise stores located here; Frank McGrane, a successful business man, and George Schmadeka, one of the pioneers of Camas prairie. Any of these gentlemen will be glad to answer all letters of inquiry addressed to them concerning Grangeville or Camas prairie. Grangeville is in the line of rapid improvement and its many advantages are worthy of the most careful inspection of people from abroad at the present time.

LEWISTON ADDITION TO GRANGEVILLE.—The Lewiston Addition to Grangeville lies southwest of the city in a most desirable locality. The Addition is beautifully situated and commands a magnificent view of Camas prairie and the mountains beyond. Lots here are 50 x 142 feet in size and are held at $50 for inside and $100 for corners. The addition is owned by the Lewiston Land Company, which is composed of Lewiston and Grangeville capitalists.

Cottonwood, Idaho.—Descending the east slope of Cottonwood butte, referred to in the article on Camas prairie, the traveler is greeted with a view of the flourishing little town of Cottonwood. This is one of the oldest settled points on Camas prairie, and it occupies the only gateway for travel by stage from the Snake

river country below, and it will, in all probability, be the first point on Camas prairie reached by railroad.

Cottonwood is attractively situated on the west side of Camas prairie, under the foothills of Craig's Mountain. The location for a town at this point is desirable in many respects. The pure mountain air here is invigorating, and the ample supply of the purest mountain water which the town enjoys is an additional safeguard to the health of the inhabitants. The wealth of timber with which the surface of Craig's Mountain is supplied makes Cottonwood a promising manufacturing point. One sawmill here, recently erected by E. S. Sweet, is already turning out 15,000 feet of lumber a day. The merchantable timber accessible to Cottonwood is apparently inexhaustible, and as the demand for lumber increases on Camas prairie, the number of sawmills at Cottonwood will naturally increase in proportion. It is worthy of note here that when the summit of Craig's Mountain is reached the descent does not commence until a broad, fertile section, varying in width from 5 to 10 miles, the great plateau on the summit, is crossed. Much of the land on this plateau is naturally barren of forest growth, while a large portion is but lightly timbered. These arable lands are being rapidly occupied by an industrious class of settlers. These people, living for a distance of 18 miles back of Cottonwood, do their trading at the latter point. Cottonwood also derives a large patronage from Camas prairie proper, and from the thickly populated districts of White Bird and Dumax plains.



GENERAL STORE, GOLDSTONE & WAX, COTTONWOOD.

The citizens of Cottonwood are always on the alert for new enterprises which will aid in building up their town. As a result of this enterprise, the largest roller-process flouring mill in the state of Idaho is located here. This mill has a daily capacity of 200 barrels. It was established at Cottonwood during the past year. The manager was induced to select this point for the establishment of his plant by the many advantages offered here for a large flouring mill, and also by a liberal land and cash subsidy which the enterprising people subscribed to here.

Prominent among the business institutions of Cottonwood are a bank, the large general merchandise store of Messrs. Goldstone & Wax, which carries a stock of goods valued at $25,000, a live weekly newspaper, *The Cottonwood Report*, and the usual number of smaller stores, as well as a good hotel and two livery stables. Cottonwood has a population of about 150. New stores and new residences are noted on every hand, and the probabilities are that Cottonwood, a year hence, will contain twice as many people as reside here today.

The Methodist and Catholic denominations have neat little church buildings at Cottonwood, and the organization of each is strong. The public schools of the town are well attended, and are presided over by two competent teachers. As before stated, the town enjoys an enviable location, when considered in relation to future railroad connection between Camas prairie and outside points now reached by lines of road. Cottonwood and Meadow Creek passes are said to be the most practicable routes for railroads entering the prairie. Surveys have already been made through these gaps. A careful examination of a map of this country will show very plainly

that Cottonwood is on the direct line with railroads which must reach Camas prairie through either of the above-named passes.

Cottonwood is fortunate in possessing a few public-spirited citizens, who are untiring in their efforts to make their chosen town one of the most important points on Camas prairie. Prominent among these are Mr. Goldstone, of the firm of Goldstone & Wax; F. J. Hogan, a successful business man, representing the interests of L. P. Brown, of Mt. Idaho; J. H. Wann, assessor for Idaho county, and owner of a valuable addition to Cottonwood, and J. S. Rhoads, who is interested in the townsite of Cottonwood. Any or all of these gentlemen will give prompt attention to all communications addressed to them concerning Cottonwood or Camas prairie.

Denver, Idaho.—The Denver of Idaho has been founded and located exactly in the geographical center of Camas prairie, on the broad plateau lying between the Salmon and the Clearwater rivers. Scarcely a year and a half ago a syndicate composed of well-known capitalists of Moscow, Pullman and Camas Prairie was formed, and the name adopted for the syndicate was the Camas Prairie Land and Town Company. They purchased from Hon. B. F. Morris, of Camas prairie, a tract of 2,720 acres of the richest loam soil, platted the center section of 640 acres, and founded on this site the town of Denver.

The site occupied by the town of Denver is a natural one both topographically and geographically. The land occupied by the town is somewhat higher than land in the immediate vicinity. This affords the best of drainage facilities. The view commanded from the site occupied by the town is almost as perfect as that described from Cottonwood butte. Grangeville and Mount Idaho, distant 10 and 13 miles, respectively, from Denver, are in plain sight to the east, while to the north and south rise the rugged spires of the Seven Devils, Buffalo Hump and the loftier range of the Bitter Root Divide, which is capped with perennial snows.

While all the attractions of the new town of Denver are inviting and the view is entrancing, it was the necessity, from a commercial standpoint, of a town at this point, that induced its location here. The syndicate, in choosing this point, located a young city that would be easy of access from all points and where it would naturally command the trade of a vast territory that, from its resources alone, must become thickly settled in the near future. Even to the casual observer, the selection of this site for the unbuilding of a city must have been patent at a glance. The promoters of the new townsite claim that Denver is destined to become the metropolis and commercial center of the Panhandle of Idaho, and the results of developments at this point during the past year furnish them sufficient grounds for making this claim.

The town was started scarcely a year and a half ago. Today Denver is a bustling little town having a population of about 200. A saw and planing mill and a sash and door factory are kept constantly running here to meet the demands for lumber and building material for the large number of structures that are constantly going up here. Almost every line of business is already represented at the new town, including two good hotels and a well stocked livery stable. A weekly newspaper, *The Denver Tribune*, is a very creditable publication for a new town of the size of Denver. Denver is on the route of the daily stage line running from Lewiston to Mount Idaho, and it is midway between Cottonwood and Grangeville, the distance between either point and Denver being 10 miles. Both the Northern and Union Pacific railroads have made surveys for new lines of road which cross Denver's

boundaries, and it is confidently believed that both these roads will reach Camas prairie in the near future. It is also believed that sufficient influence vests in the shareholders of the Denver Townsite Company to make Denver one of the objective points for any railroad that enters Camas prairie.

The members of the townsite company are I. C. Hattabaugh, I. A. Funk, Spotswood & Veatch, Dernham & Kaufmann, Jay Woodworth, Wm. Hunter, Moscow; Robert Schlicher, John P. Vollmer, Lewiston; Wallace Scott, Grangeville; B. F. Morris, Denver; W. A. Nixon, Palouse City, and the Pullman Mercantile Company, Pullman. All of the above are well-known business men and firms in Idaho and Washington, and they will undoubtedly exert every effort to make Denver the most important point on Camas prairie.

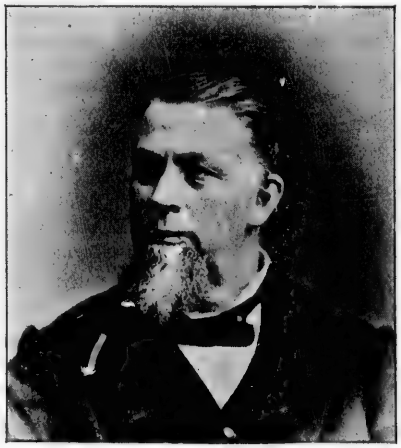
The resources of Camas prairie, together with the timber and mining districts tributary, are sufficient in themselves to build a large town at the present site of Denver. The townsite has been laid out with a liberal hand. The streets are 100 feet wide, with broad alley-ways. The land company are liberal in their donations of land or money to enterprises of merit, and they hold out reasonable inducements to every worthy manufacturing industry, or to individuals, to locate at this point.

Mount Idaho, Idaho.—Snugly situated under the "Golden Rim" of the Bitter Root and Salmon River Mountains is the seat of Idaho county, Mount Idaho. This is the most picturesque spot on Camas prairie. As early as 1862, Hon. Loyal P. Brown, the pioneer settler of Camas prairie, chose the present site of the town for an ideal place to settle. Mt. Idaho is situated at the timber line amid the most inviting surroundings of groves and springs. Perfectly sheltered from the blasts of winter, it has the advantage during the heated term of the summer months of the gentle, cool mountain breezes which come down from the higher elevations at this point.

Mount Idaho is located on the southeast corner of Camas prairie, at the foot of the Melnor trail. In early days it was the sole trading point on Camas prairie for the rich placer diggings which were then at the zenith of their success. With the decline of placer operations here other settlements sprung up at various points on Camas prairie, and the attention of the settlers here gradually became directed to the diversified pursuits of agriculture and stock raising. The trade which Mount Idaho had thus so long enjoyed thus became divided. The popularity of the town as a place of resort and as a site for residence increased with the growth of population on the prairie. It still maintains the county seat, a commodious jail and court house being located here. The county officers reside at this point and many of them own attractive residences here. The population of the town today does not perhaps exceed 100. The place, however, shows many evidences of prosperity. A new and attractive Masonic hall has just been completed here at a cost of $2,000. A new public school building is now in course of erection, and established at this point are a flouring mill with a daily capacity of 40 barrels, a sawmill with a capacity of 10,000 feet a day, a planing and shingle mill and furniture shop. The Presbyterians have an organization here, and they contemplate building a new church building at this point in the near future to cost about $1,800. The town possesses two good general merchandise stores, a hotel, livery stable and other less important places of business.

Mount Idaho is the oldest town in Idaho county. The first Republican convention held in Idaho territory assembled at Mount Idaho in 1863. The first settler on

Camas prairie, as before stated, was Hon. Loyal P. Brown. Mr. Brown emigrated to Idaho county from Oregon in 1862. He early foresaw the possibilities of future development on Camas prairie, and he chose for his home the present site of Mount Idaho, where he is still residing. He has all along pinned his faith to the future of Mt. Idaho and Camas prairie. He has already done much to advertise the advantages of this section of the state, and he is now exerting his influence in aid of the present needs of Idaho county. The citizens generally of Mount Idaho appreciate the fact that Camas prairie must be occupied by settlers and the mining districts of Mount Idaho must be developed before Mount Idaho can hope to increase largely in population. Since the attention of capital has been attracted to the valuable quartz deposits in the Elk City, Warrens, Florence and other mining districts, the people here have looked for a return of the prosperity in these mines noted in the early 60's. Active preparations are now being made for the development of these mines. Mount Idaho is most easily accessible from these districts by any of the numerous trails that were cut here during the early days of the placer diggings.



HON. L. P. BROWN, MT. IDAHO.

Weiser, Idaho.—The new town of Weiser, Idaho, is the outgrowth of the old town of the same name which was almost totally destroyed by fire three years ago. The old town having been situated more than a mile from the depot of the Union Pacific railroad was only partially rebuilt, the location chosen as a site for the new town being on the direct line of the road. The present combined population of the new and old town of Weiser is about 700. Weiser is 427 miles east of Portland and is located at the confluence of the Snake and Weiser rivers. The Snake is one of the great water-courses of the United States, it really being the main body of the Columbia which it joins near Pasco, Washington, just as the Missouri is a larger stream than is the Mississippi above the point where the former river empties into it.

Weiser contains a number of good brick buildings in which the principal part of the business of the place is conducted. In addition to the business blocks the town contains a fine brick court house, erected at a cost of $20,000, a public school building whose erection involved an outlay of $10,000 and two hotels which cost $25,000. Weiser is the judicial seat of Washington county, and the place is the center of considerable trade.

A roller-process flour mill is located at Weiser. This mill has a capacity of 125 barrels a day and supplies a large number of neighboring towns with flour in addition to shipping largely to the towns of Oregon. Weiser is the trading point of that part of Idaho which extends for about 150 miles north. The remote sections of this district have connection with Weiser by a wagon road which was built by the state

at a cost of $50,000. The public schools of Weiser are well conducted and have an average daily attendance of about 150 scholars. The Episcopal, Baptist, Congregational and Catholic denominations own church buildings in the town. The town supports one good bank and also a weekly newspaper, *The Weiser Signal.* The chief exports from the section of country of which Weiser is the trading point are horses, cattle, sheep, wool and fruit. The shipments of wool from the town for the past year aggregate 750,000 pounds and this is one of the great staple products of this part of the state.

Payette, Idaho. Payette is a small town situated in the Payette valley on the river of the same name. It is on the main line of the Union Pacific railroad, 440 miles east of Portland, and contains a present population of about 400. Located at this point is one small sawmill with a daily capacity of 15,000 feet. The logs for running this mill are rafted down the Payette river from the timber belt about 150 miles distant. This is the only manufacturing enterprise at this point.

The business district of the town is divided among three separate localities which has resulted in a townsite covering a large area but very sparsely settled. The business interests of the town are represented by a bank, three fair-sized stores, three hotels and two livery stables, together with a number of small business establishments usually found in a town of this size. The place supports one weekly newspaper, *The Payette Independent.* The enterprise of the people here has led to the erection of a fine brick school house. The average daily attendance at the public schools is about 100.

The country immediately surrounding Payette has until recently been comparatively barren. About 5,000 acres of this land have been reclaimed, however, by a system of irrigating canals which have been perfected in this section. This land when watered is among the most productive of the state. It is estimated that tributary to Payette are no less than 40,000 acres of land which will eventually be made highly productive by irrigation. The irrigating company now operating in this part of the state demands $10 per acre for a perpetual water right and an additional rental for the use of the water of $1 an acre per year. The principal dependence of Payette for advancement rests largely on the prospect of reclaiming the tributary lands by means of irrigation and the success which has already attended the efforts to get water to these lands promises much for the future of a section which can be made highly fertile by the perfection of the system of irrigating canals which are now being dug here

Washington County, Idaho.—Washington county lies in the southwestern part of Idaho and is 75 miles in length by 50 miles in width. Chief among its resources are the products of agriculture, stock, timber and mining. The Weiser valley through which flows the river of the same name, maintains a general level of about 2,000 feet above the sea. The climate of the valley is mild, which especially favors fruit growing in this section. The yield of wheat on the valley lands runs from 25 to 40 bushels to the acre, while other grains yield equally as well. Weiser valley is about 25 miles in length and about 5 miles wide. This is the best part of Washington county and the valley contains many farms in a high state of cultivation. An irrigating canal 20 miles in length has been constructed on the west side of the river through the valley at a cost of $40,000. This canal furnishes plenty of water for irrigating purposes to about 35,000 acres of land. These lands are

being rapidly settled and hundreds of acres are being planted in orchards of prunes, apples and other fruits. Much attention is also being paid in this part of the state to the raising of cereals and vegetables.

Other important valleys of Washington county are those of Mann's creek, Middle Salubria, Crane creek and the Indian, Council, Hornet and Salmon Meadows valleys. All of these are great grain and stock-producing sections. On the grazing lands of the county are about 30,000 head of cattle, 25,000 head of horses and 125,000 sheep. The timber belt of the county covers a total area of about 900 square miles. Located in the northern part af the county are some very valuable mineral deposits which are now being developed to some extent. The resources of Washington county are as varied as are those of any other county of the state and the attention of the large immigration which is now pouring into the west cannot fail to be attracted to the opportunities afforded in this part of the state for farming, stock raising or successful mining if intelligently handled.

Caldwell, Idaho.—Probably the most progressive town in Southern Idaho is Caldwell, the judicial seat of the recently created county of Canyon, which was formed from the division of what was formerly Ada county. Caldwell boasts of a prosperous population of about 1,200. The town has made its principal growth within a period of a few years past and the prospects for future advancement are most encouraging.

Caldwell is located in the heart of the Boise valley and is on the main line of the Union Pacific, 478 miles east of Portland. The course of the Boise river lies within 1½ miles of the center of the town. This is a stream which carries a large volume of water. Near Caldwell the river has a fall of 40 feet, a power that could be easily utilized for manufacturing purposes. The Boise empties into Snake river, the principal water-course of Idaho and one of the great rivers of the West.

PHOTO. BY FRANK MOORE.

MASONIC BUILDING, CALDWELL.

From a geographical standpoint Caldwell's position is a most favorable one. It is the principal shipping and trading point for the counties of Ada, Owyhee and Canyon, in Idaho, and Malheur, in Oregon. In 1892, the Caldwell Forwarding Company shipped 1,600,000 pounds of wool from this point. This was the bulk of the product of the four counties named above. During the same year the Central Lumber Company of Caldwell manufactured and shipped 4,000,000 feet of lumber, which was sent to supply the demand in the mines at Silver City and De Lamar, the Jordan valley and Bruneau countries and the territory lying east of Caldwell on the Union Pacific.

PHOTO. BY FRANK MOORE.

PRESBYTERIAN CHURCH, CALDWELL.

The importance of Caldwell's position with reference to the surrounding country which is tributary has been strengthened by the united efforts of the live young and energetic business men of the place. A noticeable feature connected with Caldwell's progress is that the principal promoters of the town's welfare are young men. Caldwell contains a number of general merchandise stores, the values of the stocks of which vary all the way from $25,000 to $50,000 each. One bank is located

here. This bank has a capital of $50,000 and is ably managed. Practically every business enterprise at Caldwell is in a flourishing condition. In 1892 the volume of the business handled at this point aggregated $1,830,000. Caldwell offers exceptional educational advantages to its youth. The public school system of the town is considered to be one of the best in the state. It provides a high school grade in addition to instruction in the primary and grammar branches. The school building is of brick and cost the district $7,000. A principal and three assistant teachers are employed in these schools and the average daily attendance of scholars is about 200. In addition to the excellent public school Caldwell is the seat of the College of Idaho, which is conducted under the auspices of the Presbyterian church. This school offers opportunities for a full collegiate course of study, and it is one of the best conducted colleges of the West. Caldwell has a good water-works plant, and an efficient fire department. The place contains three hotels, the largest of which, the Pacific, was built by the Union Pacific Railway Company. One weekly newspaper, *The Tribune*, is published at this point. The Presbyterian and Methodist denominations have recently completed very handsome church edifices at Caldwell, and the Baptists contemplate erecting a building for worship here in the near future.

PHOTO. BY FRANK MOORE.

M. E. CHURCH, CALDWELL.

The assessed valuation of property in Caldwell in 1892 was $230,000, and the only bonded indebtedness of the town at the present time is $1,000. Caldwell, although a comparatively new town, is today the fourth in population in the state. A number of brick buildings have already been erected at this point, and other fine structures are now in course of construction. The people here have always been alive to everything that promised any lasting benefit to their town. The division of Ada county was largely due to the efforts of Caldwell's citizens, and it was also through their efforts that the temporary county seat was located at Caldwell. Being the most centrally located point in the county and holding the balance of the ballot power, there is but little doubt that Caldwell will be chosen as the permanent county seat when the question shall be voted on by the people at the polls. The united and wide-awake efforts of the people at this point doubly assure Caldwell's future prosperity and continued advancement.

Caldwell now has stage line connections with the various tributary sections of Ada, Owyhee, Canyon and Malheur counties. The proposed North & South railroad which is planned to connect the Owyhee mining country with the forests of Long valley, and which will eventually furnish an outlet for the great copper mines of the Seven Devils district, will probably cross the Oregon Short Line at Caldwell. The completion of this road will do much to advance the interests of Caldwell and the country of which the town is the commercial center, and this, in connection with the Union Pacific system, will furnish Caldwell transportation facilities not excelled by any populated center of Southern Idaho.

Canyon County, Idaho.—The new county of Canyon, in Southern Idaho, is bounded on the north by Washington county, on the east by Boise and Ada, on the south by Owyhee, and on the west by the state line of Oregon. The area of the county is about 800,000 acres, half of which is susceptible of cultivation by means of irrigation. The remaining lands of the county are principally valuable for

grazing purposes, and afford fine winter range for cattle. The county is watered by the Snake, Boise and Payette rivers and the smaller tributaries of these streams.

The Boise valley, of which Caldwell is the commercial center, is a magnificent piece of agricultural land. This valley but a few years ago was a barren waste. The impression of the valley at that time was one of absolute worthlessness for farming purposes. The matter of reclaiming these lands from the government under the "Desert Act," and making them highly fertile by means of irrigation, has been solved. The best lands of this part of Idaho lie back some distance from the line of the railroad, which does not allow a traveler over the Union Pacific to form an estimate of the capabilities of production of this part of the state. An hour's drive back from Caldwell, however, takes one into one of the most fertile districts of the state. Here are magnificent farms of waving fields of grain, orchards of trees groaning under their loads of fruit, and live stock of all kinds kept fat throughout the year on the succulent grasses of this section. It is not an uncommon sight in this part of the state to see alongside a field of alfalfa or wheat the virgin sagebrush land from which the highly productive fields have been made through the reclaiming power of irrigation. Water for irrigating purposes has done wonders for the Boise valley, just as it has done for other parts of the state. The success of the irrigating system in use here can only be appreciated by a personal visit to this section. In the Boise valley for instance, there are perhaps 400,000 acres of land which are being made productive by means of irrigation. The Idaho Irrigation & Colonization Company of Caldwell, have excavated a canal for a distance of 23 miles. This leads from the Boise river, near Caldwell, almost to the Snake river, and its construction has involved an outlay of about $35,000. The canal is at a sufficient elevation to cover with water 10,000 acres of land located at a lower level. This is accomplished by means of lateral ditches, the flow into which is easily regulated by means of small locks.

The soil of Boise valley is a red loam, strongly impregnated with alkali. When this soil is well watered it yields enormous crops. Grains of all kinds, fruits, vegetables and grasses give large returns on this land. Alfalfa produces three crops a year, at the rate of about four tons an acre for each crop. Wheat yields from 40 to 60 bushels to the acre on this same land. The world-renowned fruits of Idaho are all grown on irrigated land. The cost of watering this land is not high. Some irrigating companies operating here charge as much as $10 an acre for a perpetual water right, and $1 per acre a year additional for the use of the water. Other companies ask from $1 to $1.50 per cubic inch for water, the amount ordinarily required for an acre of land. The title to thousands of acres of this dry sagebrush land still vests in the government, and this land can still be obtained under the "Desert Act" at $1.25 an acre, provided it is brought under cultivation within three years from the time the first filing is made. The cultivation of this sagebrush land is an easy and inexpensive matter. The cost of removing the sagebrush does not exceed $1.50 an acre. After the sagebrush has once been removed the soil is so mellow that plowing is wholly unnecessary to put the land in condition for planting the crop. The ordinary grain or disc drill works the soil sufficiently for the sowing of seed. The sagebrush lands of Canyon county are fast being reclaimed, and in a few years the system of irrigation so successfully inaugurated here will be extended to cover the entire area of the county that can be made productive by water carried in these irrigating ditches.

Boise City, Idaho.—"Gem of the Mountains," is the happy sobriquet applied to the new state of Idaho. In a more contracted sense the same term could be fittingly applied to Boise City, the leading city and capital of the state. Boise City is one of the oldest settled communities of the state. It is beautifully located, and in all the attributes of beauty of location it is one of the most favored cities of the West.

Nature dealt sparingly with the original townsite of Boise City. Before the reclaiming hand of man made a section fertile that was once barren, the site now occupied by the capital of Idaho was a sagebrush plain as uninviting to the eye as it was unpromising to the husbandman. Boise City is located in the Boise valley, through which the river of the same name flows. This level stretch of land is surrounded by towering mountains entirely destitute of forest growth. Before the problem of irrigation was satisfactorily solved in this part of the state, the surroundings of Boise City were as uninviting as they are today attractive. The city is now the scene of a fine park, fine trees line the principal streets, and the city is surrounded by green pastures, well cultivated farms and attractive fruit orchards. The farms of Boise valley, for the entire distance of 20 miles between Nampa, on the main line of the Union Pacific, and Boise City, present as attractive an appearance as do any of the best farms of the Willamette valley in Oregon, and the country in the immediate vicinity is now among one of the best cultivated sections of the state.

IDAHO STATE CAPITOL, BOISE CITY.

Prominent among the many striking features of Boise City are the long, broad and well kept streets. These streets, with the exception of the main thoroughfare, are, as before stated, all lined with finely developed shade trees. In the residence portion of the city are many handsome private dwellings, surrounded by broad green lawns, which bespeak much for the prosperity and good taste of the citizens of the capital city. Boise City also contains a number of very fine public buildings, chief among which are the state capitol, court house, city hall and public school. This is the richest center of population in the state, and it can be said to be the social and commercial metropolis of Idaho.

In addition to being the state capital, Boise City is also the judicial seat of Ada county. Ada is almost a counterpart of Canyon county, of which the town of Caldwell is the seat of justice. Boise City is the terminus of the Boise branch of the Union Pacific system, which leaves the main line at Nampa, 507 miles east of Portland. This branch road is 20 miles in length, and it is one of the best paying branches of the Union Pacific. The present population of Boise City is about 5,000, and this population is constantly increasing. The claim has been made that this city, in proportion to population, is one of the richest cities in the United States. The assessed valuation of city property, by the returns of last year, are $1,850,000. The estimated value of real estate situated within the municipal limits is estimated to be no less than $5,000,000. Boise City being the leading populated center of Southern Idaho, has long been the leading supply point for the principal portion of the southwestern part of the state. Within the past few years the new town of Caldwell, on the main line of the Union Pacific, has contended with Boise

for a part of this trade, but although Caldwell's business with this part of the state is constantly increasing, it is a safe assertion that the volume of the regular business held by the merchants of Boise City has not been in the least contracted by these efforts.

COURT HOUSE, BOISE CITY.

At the present time but little manufacturing is done at Boise City. The principal manufacturing industries here, at the present writing, are a roller-process flouring mill, and a foundry and machine shop combined. As a supply center for a wide and rich area of country, however, Boise City is an important city, and it is this jobbing trade, together with the business which naturally comes to the city as the capital of the state and the seat of a rich country, that constitute Boise's principal means of support.

The settlement of Boise City as a town commenced with the establishment of the military post of Boise Barracks here by the government in 1863. In the following year the territorial capital was removed here from Lewiston, where it had been formerly located, and the impetus thus given to the growth of the town was followed soon after by the location at this point of the United States assay office, the federal land office and the office of the government surveyor-general. The military post at Boise is still maintained by the government. Located here are an infantry and cavalry troup, and while the force of men kept in the barracks is not large, the government disbursed at this point during the last fiscal year no less a sum than $60,000, most of which money was added directly to the revenues of the city. The building now occupied by the government assay office is a handsome stone structure, which is situated in the center of a whole block in the heart of the city. During 1892 the amount of gold bullion handled by the assay office reached a total value of $830,753, and the number of depositors during the year was 1,594. The government annually expends about $15,000 for the maintenance of this office at Boise City. Most of the gold bullion which reaches Boise is taken out of the rich placer diggings in the country tributary to this point and a large part of the dust brought to the city is exchanged here by the miners for merchandise. Two and one-half miles east of Boise City is located the state penitentiary. The penitentiary is situated at the foot of Table Rock, an eminence of considerable elevation and the site is an attractive one. The buildings here consist of two stone cell structures, which were erected at a cost of $55,000. The grounds comprise 160 acres and they are well laid out and neatly kept. The average annual cost of maintaining the penitentiary is about $25,000, and the average number of prisoners confined here is about 72. Just west of the penitentiary grounds is a graceful knoll, out of which flows the hot springs, which have done more to effectually advertise Boise City than any other feature of interest here. A company has already expended $175,000 in the construction of a natatorium at Boise City to which this hot water is conducted, and by means of pipes this water is carried to all parts of the city where it is used for heating and domestic purposes. Two wells located 30 feet apart were bored to depths respectively of 165 and 404 feet, and from these depths water of a temperature of 170 degrees Fahrenheit was obtained. The flow from these two wells aggregates about 1,000,000 gallons. During 1891 six additional wells were sunk by the company and from these about 1,250,000 gallons of cold water flow daily. This cold water is conducted to the large reservoirs and dis-

CITY HALL, BOISE CITY.

tributed from these throughout the city under a head of 165 feet. This provides more than an ample supply for domestic purposes, and also furnishes the safest protection against fire. The natatorium itself, designed after the famous Broadwater natatorium at Helena, Montana, is in the shape of a gigantic "T." It has a frontage of 150 feet and a depth of 200 feet. The entire building is constructed in a most elaborate style. The great plunge is 50 x 80 feet in size, through which a fresh supply of water is constantly passing. An electric car line extends from the city to the natatorium, a distance of two miles. The entire natatorium is lighted by electricity and is supplied with all modern conveniences.

It was found after a careful test, that the hot water taken from the wells here could be used for heating the buildings of Boise in place of steam. Over 7,000 feet of mains and 1,500 feet of laterals were laid for conducting this hot water to all parts of the city. The water, which maintains a temperature of 165 degrees after flowing through 2,900 feet of pipe, is now being used in many of the best residences and business blocks of Boise City.

The city's supply of water for irrigating purposes is obtained from a canal leading from the Boise river. This canal runs through the city and distributes the water by means of large wheels which are kept in constant motion by the natural flow of water in the canal.

The fire department of Boise City consists of two engines and the same number of hook and ladder trucks. There are 150 men connected with the department which is run as a volunteer organization.

Boise City has the best of public school advantages. The Central High School here is one of the most imposing edifices in the state and was erected at a cost of $100,000. It is of brick and stone combined and contains every modern appointment and accessory for the most efficient school work. Fifteen teachers are employed in the public schools here at salaries ranging from $70 to $80 a month each. In addition to the efficient public schools, St. Theresa's Academy, a Catholic institution of learning, is maintained at Boise. This school is in charge of eight sisters and the average daily attendance is about 90. St. Margarette's school for young ladies, under the patronage of the Episcopal school, occupies a new building recently erected here at a cost of $25,000. The attendance at the latter school averages about 50 scholars. The Presbyterian, Baptist, Congregational, Methodist, Episcopal and Catholic denominations own church buildings here. These churches have large memberships and they are all well supported.

PUBLIC SCHOOL, BOISE CITY.

The banking business of Boise City is on the strongest of footings. The three large banking houses located here did an aggregate business of $4,510,000 during 1892. *The Boise Statesman*, published at this point, is one of the ably-conducted

daily papers of the West. In addition to *The Statesman*, *The Idaho Democrat* (triweekly), and *The Boise Sentinel* (weekly), are also published here. Boise City has a new opera house, completed at a cost of $30,000, with a seating capacity for 1,000 people. Views of a number of the fine public buildings are published in connection with the present article.

For a number of years Boise City suffered many disadvantages from not having connection by rail with the main line of the Union Pacific which passes within 20 miles of the city. The advantage of a location on the main line of road was not fully appreciated by the people of the city at the time the Oregon Short Line was being built, and as a result the proposition of the railroad management to carry their line through Boise for a certain subsidy was not favorably acted upon. This matter was subsequently partially rectified by the completion of a branch road from Nampa, on the main line to Boise. This branch stopped within a distance of 1½ miles of the city proper, however, until a little more than one year ago when it was extended into the city. The railroad company has since constructed a handsome freight and passenger depot at Boise City at a cost of about $60,000. Boise, as before stated, is an attractive place of residence, the climate is healthful, the surrounding country is rich in diversified interests of farming and mining, and the prospects for future growth at Boise are believed to be encouraging.

GOVERNOR WILLIAM J. MCCONNELL.—W. J. McConnell, the present governor of Idaho, was born in Commerce, Oakland county, Mich., on September 18, 1839. His early life was spent upon the farm. He received his education in the common schools and academies of his state, alternately teaching and attending school afte he was 16 up to the time he was 20 years of age.

In the spring of 1860 he started overland to California. Being without money, upon reaching the Missouri river he hired out to drive a six-mule team to Salt Lake City, and successfully accomplished the feat, although he had never had his hands on a mule before. Fifty-three days were consumed on this trip, for which he received $1 per day.

Mr. McConnell has had a very exciting and eventful life. He crossed the plains, fought Indians and for a short time he followed mining in California. He subsequently taught school in the Willamette valley, Oregon, and afterwards farmed very successfully in Idaho. He proved his executive ability and bravery in the important office of deputy United States marshal, and when in charge of the head office at Boise City during the most troublesome times of the territory.

In the fall of 1866 Mr. McConnell returned to Oregon, where he had been engaged in teaching school before coming to Idaho, and married a young lady there and returned to Humboldt county, California, engaging in the cattle business, for five years, after which he again returned to Oregon and interested himself in merchandising and in politics. In 1887 he removed his family to his present home in Moscow, Idaho.

During the time he was in politics in Oregon, he made frequent political campaigns for the republican party, of which he was always a member, and served as president of the state senate during the memorable Mitchell contest.

He took a prominent part in the convention which framed the present constitution of the state of Idaho and went to Washington and assisted in securing the admission of the state. He was elected one of the first senators who represented Idaho in

the United States Senate. He was there but the short term of the fifty-first congress, having drawn the shortest term, but while there he was noted for his activity and the promptness with which he entered into the questions of the day. When only a few days in the senate, he made a speech on the silver question, and on the 16th of February, 1891, he made his memorable speech on the bonded indebtedness of the Union Pacific railroad.

Mr. McConnell is a type of the self-made American. What he has accomplished he owes to his own energy and determination to succeed. He has ever proved himself a foeman worthy of any champion's steel, whether in debate or otherwise. His term of office as governor of Idaho will expire January 1st, 1895.

GENERAL JAMES F. CURTIS.—General James F. Curtis, the present able secretary of the state of Idaho, was born and passed his early youth in Boston, Massachusetts. Since 1850 he has resided on the Pacific coast. He has for a number of years past been very prominent in Idaho's state affairs, and he is justly reputed today to be one of the most popular and able men in public life in the new state of Idaho.

The ancestors of General Curtis were distinguished in the early hist[illegible] New England. His father was a lieutenant on the frigate Constitution and other ships of the United States navy during the war of 1812. At the breaking out of the Rebellion General Curtis recruited a regiment of California volunteers, of which he was appointed major. In 1864 he received his promotion as colonel of the Fourth California Infantry, and he was subsequently promoted to the rank of brigadier general of volunteers. He commmanded this regiment until the close of the war. The Fourth saw much service on the coast from Washington on the north to Arizona on the south.

General Curtis came to Idaho in 1886. In the spring of 1891 he was appointed inspector-general on the staff of the governor of the state, and was sent to the Cœur d'Alenes at the breaking out of the mining troubles there, where he was appointed to the command of the Idaho National Guard. Upon his return from active duty Governor Willey reported a message to the legislature in which he referred to the able service rendered by General Curtis as follows: "For the peaceful solution of the difficulties the state is greatly indebted to the coolness and sound discretion of General J. F. Curtis."

General Curtis, as before stated, holds the highly honorable position of secretary of state of Idaho, he is a member of the Grand Army of the Republic and of the Loyal Legion of California, and he is one of the best known and most highly respected citizens of the Pacific Northwest.

GEORGE M. PARSONS.—George M. Parsons, the present attorney-general of the state of Idaho, was born in Cambridge City, Indiana, January 15, 1850, and received his education in the public schools of Cincinnati and Hamilton, Ohio. At the youthful age of 15 Mr. Parsons enlisted as a soldier, and he served during the last year of the war as a private in company F, 189th Ohio volunteer infantry. In 1871 Mr. Parsons moved to Idaho, where he has since resided. Being possessed of indomitable pluck, which is marked in self-made men, Mr. Parsons pressed rapidly to the front in public esteem, and he was finally chosen a member of the 7th and 10th sessions of the Idaho legislature. During the years 1883-84 he held the office of probate judge of Alturas county, Idaho, and in the following year he was admitted to the bar. Mr. Parsons now enjoys the honor of holding one of the highest offices within the gift of the people of the state, and he is justly popular with his constituents.

Geo. M. Parsons, Attorney-General.
James F. Curtis, Secretary of State.
W. J. McConnell, Governor.
Wm. C. Hill, Treasurer.
B. Byron Lower, Sup't. of Schools.
Prominent State Officials
of Idaho.
F. C. Ramsey, Auditor.

FRANK C. RAMSEY.—Frank C. Ramsey, the present auditor of the state of Idaho, is yet a young man, having been born in Fulton county, Pennsylvania, in 1855. Mr. Ramsey attended the public schools of Fulton and Blair counties until he had reached the age of 10, when he was thrown on his own resources. In 1871 he went to Ohio, and later spent several years on cattle ranges in Kansas and Colorado. Inspired with the Far Western fever, Mr. Ramsey came to Idaho, in 1884, where he again engaged in the cattle business. In the meantime he had begun to take some interest in politics, and he was finally elected assessor of Cassia county, in 1888. In 1890 he was sent to the state legislature, and in 1892 he received a flattering majority for the office of auditor of the state, which office he now holds. Mr. Ramsey is another strong type of the self-made man. By persistent endeavor he has won for himself a distinction that has often been denied those who enjoyed greater opportunities during their youth than fell to his lot from the time he was first compelled to care for himself as a boy until he reached manhood's estate.

WILLIAM C. HILL.—Hon. William C. Hill, the present efficient state treasurer of Idaho, is a native of Missouri. He was born in St. Louis, of that state, in 1846. He had the advantages of a good common school training in his youth, and later attended college until 1863. Mr. Hill's early manhood was devoted to a purely business career, during which time he gained a practical knowledge of business and finance that has proved of great benefit to him in his subsequent life. Until 1870 he was engaged successfully in the mercantile business in St. Louis. In 1871 he moved to Denver, Colorado, where he again became identified with the mercantile business. Mr. Hill spent nearly 13 years in the Eldorado of the West, and during that time he noted the same great changes in that city that he subsequently saw in the young state of Idaho, his present home. The period between 1870 and 1883 was the initial stage of Denver's future greatness, and it was the efforts of the progressive young business men of the city, among whom Mr. Hill occupied a prominent position, which insured the subsequent rapid growth of the city.

In 1883 Mr. Hill moved to Idaho, and the results of his efforts in the latter state since that time are best shown in his election to the highly honorable and responsible position of state treasurer, November 8, 1892.

B. BYRON LOWER.—B. Byron Lower, the state superintendent of public instruction in Idaho, was born in Wabash county, Indiana, May 7, 1861. In 1865 his parents moved to Isabella county, Michigan, where he attended the county schools in the winter season, and as he became older worked on the farm during the summer months. At the age of 20 Mr. Lower graduated from the Mount Pleasant high school, and after three years of teaching school he entered the Northern Indiana Normal School at Valparaiso, Indiana, from which institution he graduated in 1886. Mr. Lower came to Idaho in the fall of 1887 and taught the schools of Malad City and Silver City until 1890, when he received the appointment of deputy auditor and recorder of Owyhee county, which office he filled with credit until his election as state superintendent of schools in 1892. Mr. Lower, although a comparatively young man, is thoroughly acquainted with school work in all its branches, and he is therefore well qualfied for the exalted position which he now holds.

Irrigation in Idaho.—Ten years ago a large part of that section of Southern Idaho which now contains fine farms, well kept orchards, and is the home of thousands of contented settlers, was a sagebrush waste, as sterile as it was uninviting. There was then absolutely nothing in this section to merit the attention of home-

seekers, and outside of a few settlements and the mining centers, Southern Idaho was as much a wilderness as was the virgin soil of Dakota before the advent of the railroad.

The open sesame to future prosperity in this part of the state was the one word, irrigation—with the ability to make irrigation a success. In the articles on Canyon county, found in another part of "The Handbook," will be noted a brief description of a single system of this, the vast chain of irrigating canals which now cover a large part of Southern Idaho. The results which have been accomplished here during the past 10 years have been no greater than can be looked for during the next decade and it is safe to predict that 10 years hence but little available land in this vast district will be denied the use of water to insure its cultivation.

In Washington county no large canals have yet been dug, but a number of small ditches connecting with the Weiser, a branch of the Snake, have been dug, and these laterals water a section of considerable extent. In Canyon county the Payette canal just completed, at a cost of $250,000, is one of the most important irrigating ditches of the state. This canal is 60 miles long and carries a volume of water sufficient to irrigate 100,000 acres of land. The Phillis canal starts in Ada county near Boise City, and extends through Canyon county to the rich placer mines. Its entire length is about 70 miles. The water from this canal is used both for irrigating purposes and for placer mining. The source of supply for this canal is the Boise river. Near Caldwell are two smaller canals which are described at length in the article on Canyon county. The Boise City and Nampa canal is the longest completed irrigating ditch in the state, its total length now being 100 miles. The water for this canal is taken out of the Boise river and it covers a territory of 150,000 acres in extent. The New York canal, in the same district, has already cost a half a million dollars, and when completed will be 100 miles long and will irrigate no less than 250,000 acres. In Elmore and Owyhee counties there are no large streams, but about 60,000 acres in the Snake River valley in Owyhee county, can be watered by means of a system of reservoirs, the supply for which will be obtained from the Bruneau river. Logan county which perhaps contains the largest body of agricultural land in the state, and Alturas county, rich in mining development, are irrigated with water taken from Wood river. In this portion of the state there are no large canals, but a number of small irrigating ditches have been dug here by the individual farmers. Cassia county, south of Logan, is dependent on Goose, Cassia and Salmon Falls creeks for its water supply. The farmers in this county have already constructed several small canals. Bannock county, of which Pocatello is the seat of justice, has a canal 25 miles in length, which extends to Bancroft. The water for this canal is taken from Soda creek and is of sufficient volume to irrigate from 30,000 to 40,000 acres. The greater portion of Bannock county at present is occupied by the Fort Hall Indian reservation. This reservation, as stated in the article on Pocatello, contains about 250,000 acres of fine agricultural land lying principally along the banks of the Snake river, which will some day furnish homes for thousands of people. In Bingham and Fremont counties are the St. Anthony and the Great Western canals, both located on the west side of the Snake river, and respectively 25 and 60 miles in length. These canals will irrigate about 65,000 acres of land. On the east side of Snake river in the county, are the Eagle Rock, Willow Creek and Idaho canals, the last of which is 50 miles long and extends to the Blackfoot river. The Idaho canal furnishes water for the Indian reservation, It is the intention to extend this canal in the near future to Pocatello, which will make it the longest canal in the state.

The above description, for want of space, merely touches on the principal canals of the southern part of the state, and does not mention the many irrigating ditches of this section, which vary in length fron 5 to 10 miles each. The general character of the soil of the low lands of Southern Idaho is a red, sandy loam, impregnated with alkali, or a decomposed lava free from alkali. Either of these soils is barren only when parched under the heat of the summer months, and when well watered this land is as highly productive as is any of the choicest land of the state. Irrigation has already done much for this part of the state, and it is irrigation which will prove the strongest factor in the future advancement of this promising part of the Northwest.

Shoshone, Idaho.—Shoshone is in Logan county, and is located on the main line of the Union Pacific railroad, 623 miles east of Portland. It is the place of junction of the main line and the Wood River branch of the Union Pacific system. Shoshone was at one time the division headquarters for an important part of the Union Pacific, and in the palmy days of the existence of the town from 200 to 300 men were regularly employed by the company in the roundhouse and repair shops here. On account of some dissatisfaction on the part of the railroad management with the proprietors of the townsite of Shoshone, the Union Pacific made Glenn's Ferry, a point 53 miles west, division headquarters, and large repair shops are now conducted at the latter point. All the railroad buildings at Shoshone, occupied formerly for repair shops, were built of stone, and they are very substantial edifices. Only 50 men are now employed in these shops, the principal part of the repair work being done at Glenn's Ferry.

The population of Shoshone is about 400, The most attractive building in the town is a brick school house, which was erected at a cost of $10,000. The town supports a weekly newspaper, *The Journal*, it has two hotels and a single livery stable. The Methodist and Episcopal denominations own church buildings here. Shoshone is supported principally by the rich farming section tributary, and increased areas of this land are yearly being made fertile by means of irrigation.

The Wood River Valley, Idaho.—The Wood River valley country, which includes both of the counties of Logan and Alturas, is about 35 miles in length, and has a width varying from 1½ to 3 miles Although there are thousands of acres of land in this valley which can be cultivated by means of surface and sub-irrigation, the attention of the people in this part of the state has been confined principally, in the past, to the pursuit of mining. Some of the finest mining properties in the state are located in the northern part of the valley, in the vicinity of Bellevue, Hailey and Ketchum, and beyond Ketchum is a mountainous section, not easily accessible, which is rich in precious metals. The depression of the silver market has retarded, in a great measure, the whole of this great mining district.

Embraced within the limits of the Wood River valley is Camas prairie, an unusually fertile belt of farming land, which is watered by the sub-irrigation process. These lands, together with the lands of the valley proper, yield, when properly watered, large crops of alfalfa, all kinds of cereals, root crops and fruits. The stagnation in mining circles in all parts of the Northwest has had the effect to cause the people of the Wood River country to turn their attention more and more to agriculture and stock raising, and this is fast becoming one of the most prosperous farming sections of the southern part of the state.

Bellevue, Idaho.—Bellevue is a tired looking town, with a population of about 500. It is prettily situated in the Wood River valley, on the line of the Wood River branch of the Union Pacific, 52 miles north of Shoshone, and 5 miles south of Hailey.

Until recently the sole dependence of Bellevue for support was on the mining resources of the rich mineral belt adjacent. With the decadence of mining in this section, however, has come the necessity for the people here to turn their attention to other pursuits, and as a result the cultivation of the rich agricultural lands of Logan county, of which Bellevue is the seat of justice, is now perhaps the most important industry of this part of the state. Bellevue contains a good brick public school building, four churches, of the Presbyterian, Baptist, Episcopal and Catholic denominations respectively, two hotels and two livery stables. Two weekly papers, *The Herald* and *The Review*, are published at this point. A number of strong business houses are established here, and the place enjoys considerable regular trade with a section of country that is making steady, if not rapid, progress.

At one time Bellevue was the seat of some of the heaviest mining operations in the Northwest. Located within a stone's throw of the town are the Minnie Moore and Queen of the Hills mines, two of the best known mining properties of the state. These mines are silver and lead-producing properties. The Minnie Moore has already yielded over $8,000,000 in silver, and over $3,000,000 worth of silver has been dug out of the Queen of the Hills. Both of these great mines have not been worked for nearly three years past. An English syndicate, however, has recently purchased the Queen of the Hills and this syndicate is now making every preparation to resume operations here. In the mining section tributary to Bellevue, valuable discoveries are constantly being made and the only thing wanted to infuse life into the town is plenty of capital to work what would undoubtedly develop into good paying properties. In the agricultural development of Logan county is sufficient promise for the support of a considerable town at this point and there is no reason for conjecture that Bellevue will ever be any smaller than it is to-day.

Hailey, Idaho.—Hailey, the county seat of Alturas county, is situated between the foothills of the Sawtooth range of mountains and on the east bank of Wood river. It is on the Wood River branch of the Union Pacific, 57 miles north of Shoshone. Hailey is the mining and commercial center of the Wood River and Sawtooth mining sections and the city has a population to-day of about 1,200.

The first discoveries in the rich mineral belt of which Hailey is the center were made in 1880. Since the time of the first great Wood River excitement more than 13 years ago, over $25,000,000 has been produced by the great mining properties here, a record that is not surpassed by the output of any other mining belt of the state. Among the best known mines of this section are the Minnie Moore, Idahoan, Jumbo, Red Cloud, Mayflower, Bullion, Queen of the Hills, Red Elephant and Buttercup. In the palmy days of the Wood River country these were all great mineral-producing properties and this section was the seat of one of the greatest bullion-producing belts of the United States.

ALTURAS COUNTY COURT HOUSE, HAILEY.

Hailey is a town of an attractive appearance. It contains a number of very fine

brick business blocks in addition to a fine brick court house, school building, hotel and a fine bank building. The public school building at this point was erected at a cost of $35,000. The school is presided over by good teachers and it is graded and well conducted. The Presbyterian, Methodist, Episcopal and Catholic denominations own churches at Hailey. The town contains a complete system of water works, a fine electric light plant, and a telephone exchange which also connects with the principal mines, smelters and mills located within a radius of 12 miles of Hailey.

Located at Hailey are sampling works with a daily capacity of 200 tons. A side-track connects these works with the line of railroad passing this point. The sampling works give employment to a large force of men and they regularly disburse in the town large sums of money, which adds directly to the prosperity of the place.

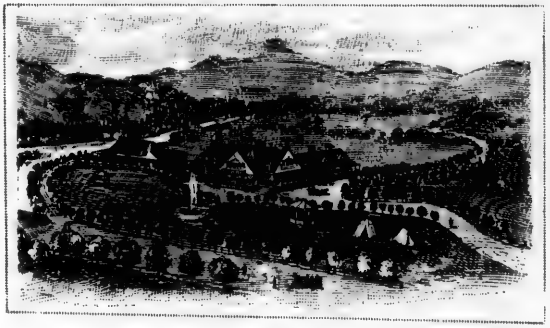
Two small daily papers, *The Times* and *The News-Miner* are published at Hailey. The fact that two daily papers are supported in a town of the size of Hailey can be taken as evidence of the progressive spirit of its people. A feature of interest to the visitor to this point lies in the numerous fine drives leading out from the town in all directions. Natural roads lead from Hailey to the very ridges of the mountain chains which hem in the valley here, and a drive over any of these roads presents fine stretches of scenery of remarkable ruggedness and grandeur. The forests through which many of these roads run are filled with an abundance of large and small game and the small streams along the way are alive with the gamiest of trout. The entire surroundings of Hailey are healthful and inviting. The altitude of this part of Idaho is high, affording a clear, dry atmosphere that is delightfully cool during the summer months and this is fast becoming one of the most popular inland summer resorts of the West. Added to delightful surroundings, Hailey is the seat of a mining district that contains untold stores of wealth and when operations are once again resumed in this mineral belt on a scale that they were formerly conducted, this will be one of the most prosperous towns in the state of Idaho.

PUBLIC SCHOOL, HAILEY.

HAILEY HOT SPRINGS HOTEL.—This beautiful health and pleasure resort is kept open the year round. The hotel is of a colonial style of architecture, three stories in height, and the hotel is strictly first-class in all its appointments. It has incandescent lights throughout. In connection with the house is an elegant ball-room, a billiard room, 10-pin alleys and ladies' and gentlemen's cement hot plunges, 35 x 70 feet in size. All the bath tubs of the house are of porcelain. The rates of the hotel per day are from $2.50 to $3.50, and per week from $14 to $21.

The hot springs connected with this hotel are highly mineralized, and of a temperature of 160° fahrenheit. The water of the springs is unsurpassed for the cure of rheumatism, kidney troubles, dyspepsia, malaria and all diseases humanity is subject to. Hotel guests have the benefit of hot mineral mud plunges which are more highly mineralized than any others in the United States. These baths have no equal for the cure of rheumatism, venereal disorders, gout and all chronic diseases. This beautiful resort is reached by the Wood River branch of the Oregon Short Line from Shoshone. Shoshone is distant only 57 miles from Hailey. This latter is a beautiful city of 2,500 inhabitants. The Springs Hotel is one and one-half miles distant from Hailey. The hotel hack meets all trains at Hailey. With the finest climate

in this inter-mountain country, with fine drives in all directions from the hotel, with trout in abundance in the numerous mountain streams near the doors, with grouse, chicken and deer hunting unsurpassed in the foothills near by, this is at once an ideal pleasure and health resort. The hotel is run under the proprietorship of R. Strahorn Co.



HAILEY HOT SPRINGS, HAILEY.

The analysis of the water of the Hailey hot springs, made by Professor N. Gray Bartlett, of Chicago, gives the following results: (This is to each nine gallons of water.) silica, 3.6 grains; carbonate of magnesia, 1.5 grains; carbonate of lime, 1.3 grains; carbonate of soda, 2.6 grains; sulphate of soda, 4.3 grains; chloride of sodium, 4.7 grains; total, 18 grains; oxide of iron, alumina and organic matter, traces; carbonic acid gas, 5.6 cubic inches.

LEMMON & BOONE.—One of the most enterprising and successful business firms of Hailey is that of Lemmon & Boone, who have been engaged in the insurance, real estate and loan business since 1882. This young firm's business extends over Alturas county and a large portion of Southeastern Idaho, and their knowledge of this territory is both accurate and reliable.

Ketchum, Idaho.—Ketchum, Alturas county, is the terminus of the Wood River branch of the Union Pacific railroad, and is 69 miles north of Shoshone. This a few years ago was an active and progressive mining town of twice, possibly thrice its present population, which is perhaps about 500. Located at this point is a large smelter with a capacity of 180 tons of ore a day. The erection of this mammoth plant involved an outlay of $500,000. With the exception of a short period during the winter of 1892-93, this smelter has not been operated since 1887.

PUBLIC SCHOOL, KETCHUM.

Some notably rich lead and silver mines in the immediate vicinity of Ketchum are the Elkhorn, which produced $1,000,000 between 1882 and 1884, and the Baltimore and Independence mines, which are said to have at least $100,000 in ore in sight. The Parker, another rich mining property of this district, netted $100,000 in 1884, and $750,000 has been taken out of the North Star here. All of these mines are now idle, a condition attributed to the prevailing low price of silver.

Ketchum is the principal outfitting and shipping point for the miners, tourists and hunters of three-fourths of Alturas county, all of Custer and portions of Idaho counties. The town boasts of one bank, a $10,000 brick school house and supports a weekly paper called *The Keystone*. The Methodists, Episcopalians and Catholics

own churches here. Two hotels and two livery stables are located at this point. The people here base their principal hopes for future prosperity on renewed activity in the mining region, the resources of which are now lying dormant.

Pocatello, Idaho.—The official government census of 1890 credited Pocatello, tha seat of Bannock county, with the largest population of any town in the state. Since that time there has been a retrogression in the prosperity which the place formerly enjoyed, and today the population does not exceed 3,500. Pocatello is strictly a railroad town. The machine and carshops, as well as the boiler works and roundhouses of the Union Pacific are located at this point. These works give employment to a large number of men, from 300 to 350 hands being on the company's payroll at this point. The railroad company regularly disburses here from $40,000 to $60,000 a month.

PHOTO. BY J. J. MC EVOY.

OPERA HOUSE BLOCK, POCATELLO.

Pocatello is at the junction of the main line and the Utah & Northern branch of the Union Pacific. It occupies a site in the Portneuf valley, a level stretch of country which extends west and north to the rich lands of the Snake river valley. All of this territory which surrounds the town, however, is embraced within the limits of the Fort Hall Indian reservation, and comprises about 1,000,000 acres, one-half of which is regarded as good agricultural land. Two tribes of Indians, the Bannocks and Shoshones, numbering in all about 1,400, occupy this reservation. Until this reservation is thrown open to settlement, Pocatello's growth will necessarily be slow, its sole dependence being centered in the heavy railroad interests at this point.

Almost every line of business is represented here. The town boasts of two national banks, two weekly newspapers, *The Tribune* and *The Herald*, and two good hotels. The public schools are held in a very handsome two-story stone structure, which was built at a cost of $30,000. Five teachers are employed in the public school here and the average daily attendance is about 400. In addition to the public school, St. Joseph's Academy, a Catholic seat of learning, is located here. This school employs five teachers and is well patronized. The Congregationalists, Episcopalians, Methodists, Baptists, Catholics and Latter Day Saints own attractive church buildings here. The town is provided with two electric light plants. It has an efficient water-works system and boasts of a number of notable public improvements. The supply of water for city purposes is held in two large reservoirs of 3,300,000 gallons capacity. Pocatello contains a handsome brick opera house, with a seating capacity of 700, which was erected at a cost of $25,000. The people here base their hopes for future prosperity on the opening of the Fort Hall Indian reservation to settlers. The occupancy of this land by a thrifty class of people would add largely to the regular trade which Pocatello now enjoys, and the cultivalion of the thousands of acres now lying idle here would make this one of the most prosperous farming sections in Idaho.

PHOTO. BY J. J. MC EVOY.

PUBLIC SCHOOL. POCATELLO.

Blackfoot, Idaho.—Blackfoot, the county seat of Bingham county, lies about 25 miles north of Pocatello, on the line of the Utah & Northern branch of the Union Pacific. It is located just beyond the northern limit of the Fort Hall Indian reservation on the Blackfoot river, and the town is surrounded by a fine stretch of farming country.

Blackfoot has a population of about 450. In addition to the regular lines of business usually found in a town of this size, Blackfoot contains a bank and supports one weekly newspaper, *The News*. A fine brick court house, the erection of which involved the expenditure of about $25,000, occupies a full block in the center of the town. A three-story stone flouring mill has recently been completed at this point. This mill has a daily capacity of 75 barrels and represents the manufacturing industry at this point.

Located at Blackfoot are the two churches of the Presbyterians and the Baptists. The town is the seat of the state insane asylum. The building occupied for the insane here is of brick and was erected at a cost of $65,000. A fine farm of 120 acres surrounds the asylum. This farm is well watered by an irrigating canal connecting with Snake river and it furnishes the asylum occupants with an ample supply of the choicest vegetables. At the present time there are about 100 patients confined in the asylum here. In the immediate vicinity of Blackfoot a number of large irrigating canals are either completed or are in course of construction and it is this system of irrigation which is proving the greatest factor in the steady advancement of this section.

Idaho Falls, Idaho.—The town of Idaho Falls is located on the east bank of the Snake river, 50 miles north of Pocatello on the line of the Utah and Northern branch of the Union Pacific system. It is 790 miles east of Portland, 186 miles north of Ogden, 196 miles south of Butte, Montana and 540 miles northwest of Denver.

Idaho Falls is a progressive town of about 700 population. Within the city limits is an available water power of very great extent. This magnificent power is utilized at the present time by a single roller-process flouring mill with a daily capacity of 75 barrels. The people of the town have hopes, however, of making this a manufacturing point of considerable magnitude and strong efforts are being made to induce manufacturers to locate here. Bingham county, in which Idaho Falls is located, is one of the most productive agricultural sections of the state. In 1891 the shipments of produce from Idaho Falls aggregated about 17,000,000 pounds, about 680 carloads. In addition the merchandise and stock shipments from this point during the same year were 520 carloads. The valuation of property within the corporate limits of Idaho Falls is now about $600,000 and this value is rapidly appreciating.

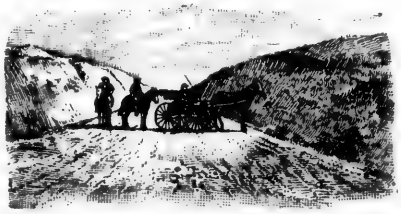
IDAHO STATE ODD FELLOWS' HOME IDAHO FALLS

Among the prominent buildings of the town are a handsome brick owned and occupied by the state order of Odd Fellows, which represents an outlay of $30,000, a brick school house which cost $10,000, a brick and stone hotel which also cost $10,000, three fine churches occupied by the Baptists, Presbyterians and Mormons. The town contains four large business houses, a bank, the regular number of smaller

stores and two weekly papers, *The Times* and *The Register*. The city has a good fire department and also a fine system of water works. Idaho Falls boasts of a crack militia company which occupies a stone armory building. The armory is also used for the purposes of a public hall. The traveling public here is cared for by three hotels.

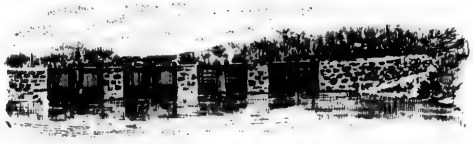
Irrigation has done as much to reclaim the lands in the vicinity of Idaho Falls as it has in other parts of Southern Idaho, and it has been the cultivation of this reclaimed land which has been responsible for the principal growth of the town during the past few years. In Bingham county at the present writing are about 500 miles of main canals and laterals which carry water for irrigating a very large area of land. The fertility of the soil of this section, which is free from alkali has attracted the attention of a very desirable class of settlers who have been pouring into the country at a very rapid rate. Among the largest and best known canals now in use near Idaho Falls are the Idaho, 50 miles in length, the Great Western, 60 miles long, the Eagle Rock, Willow Creek, Idaho Falls, Porter and Farmers' Friend, the latter of which are much shorter than the two first mentioned. The development of this section during the past five years has been very rapid. Prior to that time large quantities of farm produce were regularly shipped to Idaho Falls. Today this town is one of the most important shipping points in the state for wheat, oats, hay, barley and potatoes as well as horses, cattle and sheep. The volume of business now regularly handled at Idaho Falls reaches a total of about $500,000 and with the solid wealth of the tributary territory this business is on a most satisfactory basis.

PHOTO. BY J. J. MC EVOY.



VIEW, GREAT WESTERN CANAL, THROUGH 22-FOOT CUT, IDAHO FALLS.

PHOTO. BY J. J. MC EVOY.



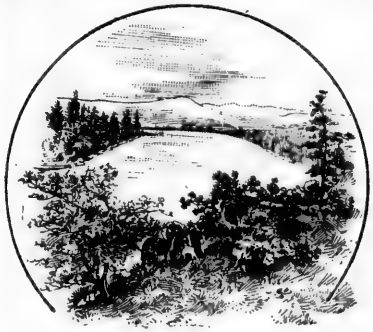
UPPER VIEW, MAIN HEADGATE, GREAT WESTERN CANAL, IDAHO FALLS.

T. J. SMITH.—When the advantages of Idaho Falls as regards water power and shipping facilities are considered, land values in the immediate vicinity are remarkably low. Mr. T. J. Smith, a prominent and reliable real estate agent of Idaho Falls, states that he can furnish land, including a perpetual water right in the vicinity of Idaho Falls for from $8 to $10 an acre. The annual assessment per acre for irrigating the same land varies from 5 to 25 cents. Although there is scarcely any government land within range of irrigating canals thus far constructed, Mr. Smith always has on hand a number of relinquishments which he is in a position to sell at from $200 to $300 per half section of 320 acres. The government price for this land is $1.25 per acre. The perpetual water right will cost from $1 to $5 per acre.

Mr. Smith is thoroughly acquainted with lands and their values throughout Bingham county and communications addressed to him on the subject will be cheerfully answered.

Thompson Falls, Montana.—Thompson Falls is a prosperous mining and and lumbering town located on the main line of the Northern Pacific railroad and on Clark's Fork river, 102 miles west of Missoula. Its name was derived from the falls near the town formed by the Clark's Fork river flowing through a narrow canyon and tumbling over precipitous masses of rock. These falls furnish an excellent available water power at this point, although up to the present writing this power has only been utilized for operating a small sawmill.

Thompson Falls now contains a population of 300. A number of large general merchandise stores located here enjoy a good trade with the tributary mining and lumbering districts. The mountains adjacent to the town are covered with a heavy growth of good timber, and lumbering has been and will continue to be for many years in the future one of the chief industries of the town. There are now two sawmills located here with a combined daily cutting capacity of 35,000 feet of lumber. The output of these mills is consumed in the towns and among the mines of Missoula county. In the mountains 20 miles distant from Thompson Falls are extensive deposits of antimony. This is a rare mineral which, when converted into a marketable state, is useful in promoting the fusion of metals, and is used especially in the casting of cannon balls. It is also used as an ingredient in the manufacture of concave mirrors. Its use in bell metal renders the sounds of bells more clear and added to tin makes the latter metal hard, white and sonorous. In its crude state it is harmless to the human constitution, but many of its compounds act violently as emetics and cathartics. The only medicinal value of the mineral at the present time is in its use as an ingredient in condition powders for animals. Gold and silver are found in paying quantities a few miles from Thompson Falls and the number of apparently valuable prospects here are now awaiting capital to develop them.



PEND D'OREILLE RIVER.

Thompson Falls is much frequented during the summer season by anglers who find in the vicinity some of the best fishing in the state. The trout here are all gamy and living as they do in the ice-cold waters of the streams of this section their flesh possesses a firmness and sweetness not found in the same variety of fish caught in the streams further to the west.

Horse Plains, Montana.—At the eastern extremity of a beautiful and fertile valley, is the town of Horse Plains, an important agricultural trading point of Western Montana. It is on the main line of the Northern Pacific railroad, 76 miles west of Missoula.

In the early history of Montana the country surrounding the present town of Horse Plains was a favorite grazing ground for wild horses, and it was from this that the town subsequently built here derived its name. The valley in which the town is located lies on both sides of the Clark's Fork river and covers an area of about 60,000 acres. The entire valley is settled and divided up into farms which are generally of about 160 acres each. These farms are all well improved and the farmers here are in a prosperous condition. The soil of the valley lands is a rich, sandy loam and crops

are raised here without irrigation. The valley farms produce annually large crops of grain and hay. It is also a fine gardening country and certain varieties of fruit do well here. In bearing condition are now fine orchards in the valley which were set out more than 20 years ago.

The town of Horse Plains contains a population of about 150. It is the most important place in the valley and the merchants here do a good business. It possesses a Catholic church and a good public school, and is in advance of other towns of the same size in the matter of public improvements.

Missoula, Montana.—In the mountain-inclosed valley of the Missoula river and at the mouth of Hell Gate canyon, is located the commercial center of Missoula, one of the large and prosperous cities of Montana. A few miles above the mouth of the Hell Gate canyon the Hell Gate and Blackfoot rivers join each other and form the Missoula (river of awe). This turbulent stream then passes out through the canyon, and in its winding course of 30 miles to the mountains to the west it cuts in twain the beautiful Hell Gate valley. This valley, inclosed on all sides by grass-covered mountains, is 30 miles long and from 2 to 7 miles in width. Opening into it from the south is the Bitter Root valley. The waters of the river of the same name join those of the Missoula a short distance below the site of the city of Missoula.

NEW COUNTY COURT HOUSE, MISSOULA.

HELL GATE CANYON, NEAR MISSOULA.

Missoula derives much of its trade from the farming communities and towns of the Bitter Root valley, which extends north and south from this point, its length being about 85 miles, while it varies in width from 1 to 15 miles. It was in this valley that Father DeSmet, in 1841, established the St. Mary's Mission, the first white settlement in Montana. The Bitter Root valley is called the garden spot of Montana. Its rich soil yields large crops of grain and vegetables, and it is the only section of Montana where fruit raising is successfully carried on. This valley dates its occupancy by the white people from the building of the famous Mullan road in the early 60's. This historic road, which extends from The Dalles, on the West, clear through to Fort Benton, on the east, passes through Hell Gate canyon. This great thoroughfare, over which thousands of immigrants wended their westward way in the early history of Oregon, Washington and Idaho, was completed by the federal government in 1860. Accounts of this great trail are closely interwoven with the history of Montana, and for years preceding the coming of the iron horse it furnished the only great artery of travel over that vast stretch of country, 800 miles in length, between the head of navigation on the Missouri river, at Fort Benton, to The Dalles, where connection was made on the Columbia river for Portland and the sea.

A BUSINESS BLOCK, MISSOULA.

In June, 1860, Captain C. P. Higgins and Frank L. Worden arrived in the Hell Gate valley with a pack train of 76 horses laden with merchandise. These men built a log store on the Mullan road at a point four miles above the present site of Missoula. This store and the small settlement which subsequently sprung up

around it, became known as Hell Gate. The origin of the name in this section was as follows. In the earliest history of Montana the Blackfoot and Flathead Indians were deadly enemies. The Blackfeet claimed the canyon now known as Hell Gate, and used it as an open highway for their war parties. If the Flatheads or others camped near the canyon, the camping parties were almost certain to be raided and their camps despoiled by the Blackfeet. From these frequent depredations of the Indians came the trite remark that it was as unsafe to camp at the gates of hell itself as near the mouth of the canyon. It was thus that Hell Gate canyon was named, and it is by this name that it has since been known.

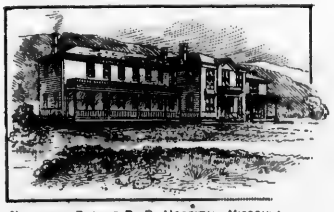
A Prominent Corner Missoula.

The little settlement at Hell Gate passed through the trying vicissitudes incident to the growth of the frontier towns before the advent of railroads. For a considerable time after its establishment it enjoyed the unenviable reputation of being a "tough place." In 1864 the store at this point was moved to the site now occupied by the flourishing city of Missoula. It was thus that the town of Missoula was born, and although from the date of its first settlement the name of Missoula was attached to the town, it was for many years subsequent to its settlement known better as Hell Gate.

Fort Missoula.

On August 7, 1883, the first cars of the Northern Pacific railroad reached Missoula. The completion of this great transcontinental road, 30 years after its route across the continent had been selected, gave Missoula its first real start towards metropolitan importance. It opened up new avenues of trade for the town, it brought many people to settle in the immediate vicinity, and was the means of bringing capital to the West to develop its wonderful resources. Missoula owes its great growth since the completion of the Northern Pacific to its location in a section of country of great and diversified resources. From a mere hamlet of probably 50 people, in 1864, the place has grown to a city of 5,000 population. It is now the great jobbing center of Western Montana, enjoying an extensive trade with the rich agricultural valleys of the Bitter Root and Flathead valleys, and with the rich mining centers of the Cœur d'Alenes. The business streets of the city are lined with imposing three and four-story buildings, constructed of pressed brick, cut stone and granite. These buildings are all modern in their appointments, being as finely fitted as are any of the best structures of Chicago or New York.

There is still a prevailing impression in the minds of the Eastern people that Missoula and the other cities of Montana are still the scenes of wild frontier life. In refutation of this, it can be stated that all the great cities of Montana are today as well governed as are any of the older settlements of the East. In Missoula the people are not only law-abiding, but they are prompt to discountenance all efforts of the vicious element



Northern Pacific R. R. Hospital, Missoula.

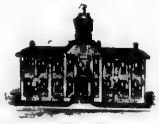
to create disturbances of any kind. It may also be news to Eastern readers of "The Handbook" to state that few cities of the present population of Missoula, anywhere, contain as many costly business blocks as are found here, while the elegant private homes of the city would grace the best streets of Chicago. The residence portion of Missoula presents a most attractive appearance. Its homes are of a modern style of architecture, and these homes are surrounded with well kept lawns, while the profusion of flowers, trees and shrubbery which are found here has led to the adoption of the title, "Garden City," for this flourishing center of trade. The principal streets of the city are 100 feet wide. The streets are well lighted after nightfall by electricity, the business portion of the city is connected with the Northern Pacific depot by a well equipped horse-car line, and on every hand is seen here evidence of the many public improvements which are found in any of the largest Eastern cities.

WATER WORKS, MISSOULA, IN 1866.

Missoula's supply of water is taken from the Rattlesnake, a pure mountain stream which furnishes an inexhaustible source of supply for the city. The fall from the point where the water is taken out of this stream to the city affords sufficient pressure to furnish an ample protection against any fire that might ever obtain headway here. A fine volunteer fire department is maintained here, which is a double safeguard against fire.

Excellent educational advantages are afforded the youth of Missoula. The public school system of the city requires the use of three large school houses, in which 15 teachers are employed. In 1893 the total average enrollment at these schools was 700. In addition to the public schools the youth of the city will soon have the advantages for a higher education afforded by the Montana State University. The building which this advanced seat of learning will occupy is now under course of construction. It will have cost when completed about $100,000. There is also maintained at Missoula an excellent Catholic school which has a large attendance of pupils. The people of Missoula take a just pride in their excellent school system. In addition to the educational work of the schools here is a fine public library, which contains over 2,000 volumes of standard literature. The religious organizations of the city are represented by one Catholic and six Protestant churches which are liberally supported.

NORTH SIDE SCHOOL, MISSOULA.



CENTRAL SCHOOL, MISSOULA

Missoula is an important railroad center. In addition to its location on the main line of the Northern Pacific, it is also the terminus of the Missoula & Bitter Root Valley and the DeSmet & Cœur d'Alene branches of the same system. The Bitter Root Valley branch runs through the valley of the same name to Grantsdale, a distance of 50 miles. All the country traversed by this road is well settled, and its trade is controlled by Missoula. The DeSmet branch runs through the great Cœur d'Alene mining districts, and with its extensions makes a continuous route from Missoula to Spokane, the largest inland city in Washington. The building of this

'cut off," as the DeSmet branch is called, has resulted in making Missoula the eastern outfitting point for the mines of the Cœur d'Alenes. The commercial relations of Missoula with the rich mineral belt opened up by the completion of the DeSmet branch, and with the other mining districts which immediately surround the city, are most important factors in its progress and prosperity. With these mineral districts and with the rich agricultural sections tributary, Missoula now does a trade which approximates about $2,000,000 annually.

CATHOLIC CHURCH, MISSOULA.

It is claimed that Missoula occupies the only site on which a large city can be sustained, between Helena on the east, 125 miles distant, and Spokane, 250 miles west. A careful study of the topographical features of the sections of country intervening between these points will convince any reader of the truth of this statement. Missoula is thus made the metropolis of a vast area extending north from this point to the British boundary, west to the Idaho line and east to the summit of the Rocky Mountains. It is also the banking center for a rich and populous center of country. The banks of Missoula today are the First National, with a capital of $150,000 and a surplus and undivided profits of $350,000 and the Western Montana Bank, with a capital stock of $75,000 and a surplus and undivided profits of $25,000.

METHODIST CHURCH, MISSOULA.

Missoula is the headquarters of the Rocky Mountain division of the Northern Pacific. Residing in the city are 350 regular employes of this road. Large machine and repair shops, car houses and roundhouses are maintained here by the railroad company. The company's hospital is also maintained at this point. With the exception of the railroad shops there are no large industrial plants located at Missoula. In the immediate vicinity of the city, however, are a number of large sawmills and wood-working plants owned principally by Missoula capital. At Bonner, six miles distant, is a large sawmill with a daily capacity of 135,000 feet of lumber. The output of this and the other mills in Missoula county is largely used in mining development work throughout Western Montana. The lumber industry here is an important one, and in this connection it is significant that the greater portion of the lumber consumed in Montana is cut in Missoula county.

The immediate surroundings of Missoula are attractive to both the home-seeker and to the tourist. The mountain scenery here is picturesque. Viewed from any of the principal streets of Missoula, the entire valley in which the city is located is apparently entirely enclosed by mountain ranges. The peaks of these ranges, while not covered with perennial snows, are yet lofty enough to serve as landmarks for a wide extent of country. The valley is perfectly sheltered by these hills from the cold blasts of winter, while during the heated term of the year cool breezes sweep down from these heights into the valley below, thus insuring the people of Missoula an escape from the torrid heat of other parts of the state, and nights sufficiently cool to insure sleeping with comfort under a blanket.

FIRST PRESBYTERIAN CHURCH, MISSOULA.

Near Missoula are a number of thermal springs the waters of which are largely mineral in their nature. The most fre-

HISTORIC FORT OWEN, STEVENSVILLE, BITTER ROOT VALLEY.

quented of these springs are those at the head of the Lo Lo canyon, 30 miles distant. Four miles southwest of Missoula on the east bank of the Bitter Root river is the fort of the same name, at which a government post is maintained. It is garrisoned by three companies of infantry. The military reservation on which the fort is located comprises 3,000 acres. This post was established in 1876 on account of its favorable location for dispatching troops and supplies to various points in the Northwest. This fort is a distinguishing feature of interest in the section of country of which Missoula is the trading center, and it is visited by the great numbers of tourists who now annually visit Missoula in search of health and recreation.

Stevensville, Montana.—Stevensville, the oldest settlement in Montana, is located on the east side of the Bitter Root valley, 28 miles south of Missoula. The line of the Missoula & Bitter Root Valley branch of the Northern Pacific runs about three miles distant from the town, on the opposite side of the river. A good bridge spans the river at the railroad station, thus affording easy access to the town. Stevensville now contains a population of about 200, and it contains many of the types of men who were famous in Montana a quarter of a century ago.

Stevensville is a place of great historic interest. It was first known as St. Mary's and, subsequently, as Fort Owen. The Flathead Indians occupying the valley here before the advent of the white man were a tractable race much further advanced towards civilization than were the other Northwestern tribes. These Indians having heard of the "Black Gowns," as they termed the Jesuit priests, were anxious to have these priests come to their valley. They dispatched four of their number to St. Louis to invite the reverend fathers to come and live among them. The result of this visit was that Father De Smet and other priests came to the Bitter Root valley in the spring of 1841 and established the famous mission of St. Mary's. The Flathead Indians, under the teachings and example of the Jesuit Fathers, rapidly embraced the Catholic religion, and it is the boast of the tribe that they never shed white man's blood.

CHURCH AT STEVENSVILLE.

In 1850, Major John Owen, an army sutler, came into the Bitter Root valley. He saw the eligibility of the site of St. Mary's mission for a trading post. He purchased the land here from the Catholic Fathers who removed a mile or two further up the valley, where they established a new mission but retained for it the old name of St. Mary's. The church at the site of the latter mission is still standing in a good state of preservation. At the abandoned mission Major Owen first built a palisade fort and, subsequently, he erected a fort of adobe. The enclosure was known as Fort Owen, and portions of the walls of this early fort and two of the bastions are still standing as landmarks of the early settlement of the Bitter Root valley.

CHURCH AT STEVENSVILLE.

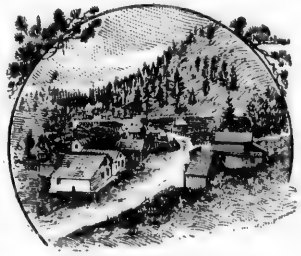
In 1864 the townsite of Stevensville was laid out. This occupied a site between Fort Owen and St. Mary's mission. In the old mission cemetery, near the town, stands a marble shaft which marks the last resting place of Father Ravalli, a pioneer priest who figured

prominently in Montana's early history. This was erected by act of the Montana legislature.

Stevensville is now the seat of justice of Ravalli county, which was created by act of the state legislature in March, 1893. The town presents a pastoral appearance, with its four houses of worship and its neat and tasty residences well shaded by fine trees. Among the features of the town worthy of mention are a five-room school house, erected at a cost of $7,500, a public library and two weekly newspapers. The Bitter Root valley at this point assumes its greatest width, it being about 15 miles wide here. It is well settled in the vicinity of Stevensville, and the town enjoys the trade of a prosperous farming community which is yearly increasing in population and importance.

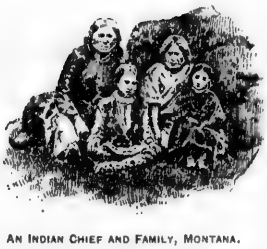
Hamilton, Montana.—Hamilton, the largest town in the Bitter Root valley, is located 47 miles north of Missoula, on the Bitter Root branch of the Northern Pacific railroad. It was founded in the fall of 1890, and now contains a population of about 1,200. The townsite is attractively laid out with broad streets, the lots all having a wide frontage. In addition to a number of general merchandise stores, Hamilton contains a fine public school, three churches, a bank, one weekly newspaper and two well-conducted hotels. Nearly all the wage earners of the town are employed in the large sawmill of the Bitter Root Development Company located at this point. This mill has a daily capacity of 100,000 feet of lumber and it is one of the great manufacturing industries of Western Montana.

Hamilton's chief distinction lies in its being situated within the confines of the famous Marcus Daly stock ranch. The area of this ranch is between 9,000 and 10,000 acres. Over 150 men and women are employed on the great ranch in various capacities. The brood mares on the Daly ranch have been culled from all the noted breeding establishments both of the East and the West. They have been selected not only for their breeding qualities but for the individual perfection of the animals. Nearly every trotting sire of note in the United States has one or more representatives on this ranch. The thoroughbred running horses owned by Mr. Daly won many of the great turf races of 1892. The total winnings of horses from this ranch in that single year amounted to $115,000. This remarkable success of Western horses on Eastern race tracks resulted in Montana's becoming famous throughout the Union as the home of some of the greatest racers that were ever put on the turf.



SUPERIOR, MONTANA.

The Flathead Valley, Western Montana.—The picturesque and fertile Flathead valley with its numerous creeks, lakes and rivers, lies between the ranges of the Rocky, Mission and Kootenai Mountains. It is an irregular basin extending north and south for about 150 miles. Its northern limit is British America and its southern boundary is found within the limits of the Flathead reservation, about three miles north of Ravalli, a station on the Northern Pacific railroad. It varies in width from 10 to 30 miles. Numerous smaller valleys open into the Flathead and these, with the main valley of the Flathead, form an immense body of rich agricultural land.



AN INDIAN CHIEF AND FAMILY, MONTANA.

The Flathead river, flowing south from the British possessions to the north, empties into Flathead Lake near the center of the valley of the same name. This river is fed by numerous streams which find their source in the small lakes in the valley and the mountains which surround it. Flathead Lake is a magnificent sheet of water, about 30 miles long and 10 miles wide. It is the largest lake in the Rocky Mountain system. Its outlet is the Pend d'Oreille river, a swift-flowing stream that joins its waters with those of the Clark's Fork river near Horse Plains. The shores of Flathead Lake make an ideal summer resort, the surroundings being beautiful and highly picturesque in scenic effects. Tall mountains rise at the sides of the lake, wooded islands with craggy shores dot the surface of the waters, and numerous arms of the lake stretch far towards the interior of the mountain ranges. The water of the lake is clear, of a deep blue tinge and in places it is very deep. The lake teems with gamy fish and its shores and islands are favorite resorts and breeding places for aquatic wild fowl. A number of steamboats ply on the lake and, with the exception of a short season during the winter when the lake is frozen over, make daily trips. The lake is reached without difficulty by a daily stage from Ravalli.

GLIMPSE OF FLATHEAD LAKE.

The rich soil of the Flathead valley produces good crops without the aid of irrigation. Some of the lands under cultivation yield from two to three tons of hay, 60 bushels of oats and 45 bushels of wheat to the acre. Apples, plums and cherries are grown here and the success attending their culture has stimulated the settlers in the valley to further effort in the raising of fruits. A good market for the products of the valley is found in the cities and mining camps to the south. The Flathead valley was for many years known as a grazing country, and at one time immense herds of cattle roamed over its grass-covered lowlands. This was not considered a good farming country until about five years ago. The tilling of the soil may be said to have commenced about the time the Great Northern railway proposed to build a line across its northern limits. When the tracks of this road did reach the valley it brought with it a great tide of emigration which settled here. In a short time thousands of acres in the valley were placed under cultivation and a greater portion of the lands in the northern part of the valley were enclosed by fences.

The principal towns of the Flathead valley today are Kallispell, Demersville, Columbia Falls and Egan, all flourishing towns with excellent schools, churches, etc. The general altitude of the valley is about 3,000 feet. The summers here are warm and pleasant with cool nights. Winter does not set in here as early as it does in the Middle Western States, and while the fall of snow during the winter months is usually heavy it disappears early in the spring, thus allowing ample time for the planting and maturing of crops.

ST. IGNATIUS MISSION, FLATHEAD INDIAN RESERVATION.

There is still a large area of vacant government land in the valley and when the government throws open the great Flathead Indian reservation thousands of acres additional, the finest land in the state, will be ready for occupancy. This reservation comprises an area of over 2,000 square miles. It is a tract of country extending from the center of Flathead Lake to the mountainous district lying south of the line of the Northern Pacific railroad. It is now occupied by 1,500 Indians and half breeds, many of whom have farms under a high state of cultivation. These Indians are law-abiding and they form an important adjunct to the working population of the state of Montana.

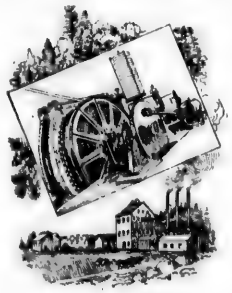
Drummond, Montana.—Drummond is the diverging point from the main line of the Northern Pacific for Phillipsburg. This branch connects Drummond with Phillipsburg and the famous Granite Mountain mines, a distance of 26 miles.

Drummond is 72 miles west of Helena, and 310 miles east of Spokane. It has a population of about 150. The principal importance of the town is its connection with the Northern Pacific as the terminal point of the Phillipsburg branch road.

Phillipsburg, Montana.—This old and interesting town is the supply center for one of the most important mining districts of Montana. It is located 26 miles south of Drummond, on a branch of the Northern Pacific which runs to the famous Granite Mountain mines. The town lies in the Flint Creek valley, at the base of a heavy spur of the Rockies. It was first settled in 1866. In the following year the first silver mill in Montana was erected in Phillipsburg, on the Hope mine property. The pans of this mill were shipped by wagon all the way from San Francisco. In crossing the Rio Virgin, in Southern Utah, the wagon sunk in the quicksands, and the pans remained buried there until they were finally raised by derrick months afterwards. With the exception of slight intervals of rest, this 10-stamp mill has been constantly operated, since 1867, in crushing the free-milling ores taken from the deposits of Hope Hill.

DRY CRUSHING CHLORIDIZING MILL, BI-METALLIC MINING CO., PHILLIPSBURG.

Phillipsburg is now an attractive city of 3,000 inhabitants. It occupies a site of sufficient area for a city of many times its size. The grassy vale in which it is built is surrounded by high wooded mountains. Five miles from Phillipsburg are the great mineral properties of Granite Mountain. These mines, when in operation, furnish employment to over 2,000 men. The trading for these mines is all done at Phillipsburg. In the town one principal street leads down the gradual incline on which the place is built to the Northern Pacific depot, located half a mile distant from the business center. Leading across this main thoroughfare the other broad streets of the town extend. On the main street are a number of substantial business blocks, Two strong banks are located here. Phillipsburg has several hotels and a number of very strong business houses. It has a complete system of electric lights, and it is supplied with pure mountain water taken off the granite bedrock and piped to the town from large reservoirs. Two public school buildings are established here, as are several strong church organizations. Phillipsburg is



HOISTING ENGINE AND MILL, BI-METALLIC MINE, GRANITE.

one of the principal mining centers of Montana outside of Butte and Helena, and large sums of money are invested in the city and in the mining properties adjacent.

An act of the Montana legislature, in the session of 1892-93, created the county of Granite, which was cut off from the former large county of Deer Lodge. Phillipsburg, by this act, was made the seat of justice of the new county. This has added considerably to the importance which the town previously enjoyed. When the mines are all in operation here, their combined pay-roll amounts to thousands of dollars a month. This money is regularly spent in Phillipsburg, thus insuring sufficient money in circulatien here at all times to insure the prosperity of the business community.

The district of which Phillipsburg is the center, contains about 5,000 mineral locations, but few of which have been sufficiently developed to show their merits. A large number of these claims show immense deposits of low-grade ore, which varies in richness from 7 to 20 ounces in silver per ton. This is known as the Flint Creek mining district. It comprises an area of mineral land 15 miles square, situated on the western exposure of the Granite range, near the head of Flint Creek valley. It incloses the famous Granite Mountain ledge. Three miles from Phillipsburg is the Granite mine. This was discovered in 1872. by Eli D. Holland, and it was recorded in July, 1875, by J. W. Estill, E. D. Holland and J. M. Merrell. There was but very litttle development work done on this property until the autumn of 1880. In that year a syndicate was formed under the name of the Granite Mountain Mining Company, to make the attempt to demonstrate the value of this property. Before the syndicate purchased this claim it had been bonded, on several different occasions, for less than $40,000. A mine that could have been held at one time, by those who had bonded it, on the payment of a few thousand dollars, subsequently paid dividends of over $12,000,000. The Granite is now one of the bonanza mines of America. From August, 1885, to July 31, 1891, the output of the mine amounted to 250,043 gross tons of ore, which yielded 17,756,374 ounces of silver and 21,648 ounces of gold. Up to December 31, 1892, the Granite had paid dividends of $11,880,000. In 1890 the Granite company paid dividends of $2 500,000, and during the same year they expended, in development work, over $1,300,000. In that year the ore from the mine averaged 71 ounces in silver per ton, and in 1891, 51 ounces. The Granite company operates a 100-stamp mill at Rumsey, and a 90-stamp mill at Granite. Both of these places are small camps near and directly tributary to Phillipsburg. During 1891 the average cost of mining the ore of the Granite mine was $15 a ton.

Adjoining the Granite and on the same ledge are the properties of the Bi-Metallic Mining Company. This company was organized in 1886 with a capital stock of $10,000,000, divided into 400,000 shares of a value of $25 each. Its history is similar to that of the Granite Company. At first the Bi-Metallic properties were not considered of the first order. As they were developed, however, immense bodies of ore were discovered. This ore runs from 60 to 75 ounces in silver per ton. In the Blaine, owned by this company, a shoot of ore two feet wide and 150 feet long, assayed 800 ounces of silver to the ton. The Bi-Metallic is now one of the bonanza dividend-paying companies of Montana. The total dividends paid by the company up to December, 1892, amounted to $1,800,000. This company owns 20 lode claims on and adjoining the Granite Mountain ledge, and 12 claims near Phillipsburg where their two 50-stamp chloridizing dry-crushing mills are located.

South of Phillipsburg lie the possessions of the Algonquin and Northwest Mining Companies. The property owned by these companies consists of well developed

mines. The Northwest Company suspended operations in 1879, and the Algonquin in 1882. At that time the heavy cost of transportation in hauling supplies to these mines only permitted the companies operating them to handle high-grade ores. Ores then that averaged less than 70 ounces in silver to the ton could not be profitably worked. Two chloridizing dry-crushing mills, erected by these companies at a cost of $325,000, have been permitted to lie idle and decay during the past few years when they could have been run at a profit to the owners. The stockholders in these two companies reside in the East, and for 10 years prior to 1893 they neglected properties at Phillipsburg which, if worked, would have paid large dividends. Other mines at this point are the Bath, West Granite, North Granite, San Francisco, Latonia and Princeton. In addition to these are many other rich mines or claims near Phillipsburg, which the owners hope will ultimately develop into as great properties as are the Granite and the mines of the Bi-Metallic Company.

Garrison, Montana.—Garrison is situated in Deer Lodge county, on the Hell Gate river, 51 miles west of Helena. Although a small place, containing but about 100 population, it is an important point on account of its being the junction of the Northern Pacific and the Montana Union railroads. The latter line runs in a southerly direction from Garrison to Butte, a distance of 51 miles. The road between Garrison and Butte passes through the towns of Deer Lodge, Stuart, Anaconda and Silver Bow. In the vicinity of Garrison is excellent hunting and fishing. Large game is plentiful here, and the Blackfoot river and its tributaries near by are full of the finest varieties of speckled trout.

Deer Lodge, Montana.—Deer Lodge, one of the oldest settlements in Montana, is situated in the center of the agricultural valley of the Deer Lodge river. It is a station on the line of the Montana Union railroad, 11 miles south of Garrison, the junction of the Montana Union and the Northern Pacific. Helena is 62 miles distant from Deer Lodge, while the town is separated from Butte by a distance of 40 miles.

The early history of the town of Deer Lodge is replete with interesting and sensational incidents of frontier life. It was near this place in 1864 that many of the desperate characters of Montana's early history paid the penalty for their crimes, they having been executed by the Montana committee of safety. In the early days of Montana there were no courts of justice in the territory and the protection of life and property was by common consent relegated to the vigilantee committees made up of the most respected people of the community. By summary methods, taken in all cases, however, after the fairest of trials and the fullest convictions, the territory soon ceased to be terrorized by the lawless element and it is the boast of the surviving members of the old vigilantee committees of the early history of the present rich state that life and property were never more secure than they were during the time that the people governed themselves without the aid of courts or lawyers.

It was in that portion of Montana which is now embraced within the limits of Deer Lodge that the first discovery of gold was made in the state. The honor of this first discovery rests on Francois Finlay, an Indian trader, who took out the first dust in 1850. In 1864, following the great discovery of surface gold at Bannock City and Alder Gulch, prospectors began to arrive in Deer Lodge county, and about the same time Deer Lodge was founded as a trading and outfitting point for the surrounding mineral districts. The importance of the settlement here in the early days of its history and the amount of trade it enjoyed may be inferred from the fact that the

placer fields of Deer Lodge county yielded the immense sum of $13,250,000 between 1863 and 1868. In 1870 the first signs of the failing returns from the placers here became apparent and the attention of the mining men from that time forward began to be diverted to the more arduous and then less promising fields of profit offered by the development of the rich quartz ledges which the territory contained.

The working of quartz ledges in Deer Lodge county is now an industry of great and constantly increasing magnitude. In 1891 this county produced 4,850,821 ounces of silver, and 19,586 ounces of gold. The decline of the price of silver in 1893 has resulted in the working of the placer mines here, and at the present writing within a radius of 20 miles of Deer Lodge there are hundreds working at fair wages in the placer diggings. Some of the placer fields in Deer Lodge county have now been constantly worked for more than 20 years past without any indication of their giving out, but the yield of gold from these diggings is small today in comparison with the wonderful output of the placers here in the early 60's.

The growth of Deer Lodge City has kept pace with the development of the county of which it is the trading center and seat of justice. It is now an attractive and wealthy city with a population of about 1,600. The site it occupies is evenly laid out, with wide and deep lots, broad thoroughfares which are lined on each side with shade trees. The business blocks are well built and many elegant and costly residences are scattered over the city. Few cities of equal population contain a greater number of fine residences than are found in Deer Lodge. There are in the city today mansions that cost as high as $50,000 and there are many beautiful homes here valued at from $10,000 to $20,000 each. A feature of the city that adds much to its attractiveness is a $50,000 court house which occupies the center of a square laid out in walks and flower beds. Other imposing edifices of the place are the large brick buildings of the College of Montana and St. Mary's Catholic Academy. These institutions rank high among the seats of learning in the West, and their establishment at this point has resulted in making Deer Lodge an important educational center. The city possesses a 10-room public school building which was erected at a cost of $30,000. The western division of the Montana state penitentiary is located here and it occupies well appointed buildings with ample surrounding grounds.

A model system of electric lights illuminates the streets and business houses of Deer Lodge and an excellent system of water works provides an ample supply of the purest water to its citizens. This water is taken from a mountain stream near the city. The altitude of Deer Lodge is 4,500 feet. The extremes of heat and cold are not felt as much here as they are on the lower levels of the state, and the climate of this part of the state is said to be a delightful one.

The raising of standard-bred and blooded stock is an important and growing business on the ranches in the vicinity of Deer Lodge. The land and climate here are especially favorable to the raising of fine stock, and during recent years Deer Lodge has become known throughout the East as the home of horses of national reputation. Thoroughbreds foaled and raised at Deer Lodge have figured prominently in some of the classic events of the American turf. Deer Lodge is the home of Poet Scout, High Tariff, Nevada, Eolian, Regent, and a number of other well-known thoroughbreds that have won laurels on the turf.

Farmering is now carried on in Deer Lodge valley by means of irrigation. The small grains, vegetables, grasses and hardy fruits grow here to perfec-

tion. The lakes and hills in the vicinity of the city abound in fish and game. The Big Blackfoot river is a famous trouting ground and within half a day's ride of the city are the Dempsey Lakes where myriads of speckled trout are found. Eighteen miles to the south of Deer Lodge are the famous Warm Springs while a few miles beyond these is the favorite resort of the Gregson Hot Springs. Both of these springs are noted resorts for tourists and invalids.

The location in Deer Lodge of splendid educational institutions, the homes of wealthy men together with its fine climate and healthful environments all combine to make the city a most desirable place of residence.

Helena, Montana.—Helena, the capital city of Montana and the judicial seat of Lewis & Clarke county, is situated on the eastern slope of the main range of the Rocky Mountains. The great wealth, unsurpassed scenic surroundings and romantic history of this city have combined to make it widely known throughout the United States.

Nature has endowed the country in the immediate vicinity of Helena with many scenic attractions and a diversity of mineral wealth. Towering behind the city proper is the grass-covered and pine-clad Mount Helena. Lying in front of the city and stretching away for 15 miles is the beautiful Prickly Pear valley. Near the city are a number of health-restoring thermal springs. Twelve miles to the north of Helena lies the Missouri river, which from this point north to Fort Benton presents one of the scenic wonders of the world.

MT. HELENA, HELENA.

It was not natural beauty of surroundings or favorable climatic conditions that first led to the establishment of a settlement at this point. Out of the neighboring hills, from the gulches in the immediate vicinity and from the very site on which the city stands today millions of dollars worth of gold dust has been taken, and it was the discovery of the rich gold deposits here that gave birth to a place that has since become one of the most prosperous inland cities of the continent.

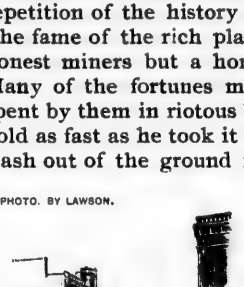
Helena owes its birth to a fortunate incident in the career of four men. On July 15, 1864, four weary and disappointed prospectors, who had been wandering in search of gold among the gulches of the Rocky Mountains, camped for the first time within the present city limits of Helena. The following day they began to prospect along a small tributary of the Prickly Pear. It was their last chance to find gold before turning homeward, and before a pan of dirt was washed they named the locality Last Chance gulch. Fortune smiled on these intrepid miners. The first pan of washed gravel revealed $20 in coarse gold. They had finally "struck it rich" The news of this rich discovery was not long in reaching the mining camps of the territory and a few weeks later hundreds of men were working the Last Chance placers. Fortunes were made in these diggings in a few days, and during the first six years after their discovery these placers had yielded over $15,000,000 in gold. From the 200 feet square now occupied by the Helena

OLD LAND MARKS, MAIN STREET, HELENA.

depot of the Montana Central Railway Company two men took out over $330,000 in gold dust. Another rich strike was made within the present city limits on the site now occupied by the First National Bank building. All the business section of Helena may be said to cover what was once one of the richest gold fields in the world.

Soon after the discovery of gold in Last Chance gulch there sprung into existence in its center a town of several hundred inhabitants. On October 30 of the same year gold was discovered here, the gallant miners named the new town Helena, in honor of Homer's heroine of ancient Troy. The early history of Helena is but a repetition of the history of the other rich and isolated mining camps of the state. The fame of the rich placers of Last Chance gulch attracted not only thousands of honest miners but a horde of the most disreputable members of society as well. Many of the fortunes made here by the miners, after the hardest kind of toil, were spent by them in riotous living, and many a lucky prospector in the gulch spent his gold as fast as he took it from the sluice box. It was not uncommon for miners to wash out of the ground from $15 to $175 a day apiece, and yet these same men returned to work each morning penniless after their night's debauch. Others, more prudent, amassed fortunes, and many of the stately buildings which now line Helena's streets are monuments to their enterprise and energy. The vicious element not only coveted the hard-earned money of the miners but they were a menace to the lives of law-abiding citizens. The better element in the camp at length found it necessary, in order to protect their lives and property, to execute a number of these thieves and murderers. Thirteen men in all met their death at the hands of the Helena Vigilance Committee. All of these men had committed atrocious crimes and justly deserved the punishment which was meted out to them. Hangman's tree, from a branch of which the rope that executed these men was suspended, was for many years an historic mark of Helena. The tree stood as a menace to wrong-doers until finally cut down in 1876.

PHOTO. BY LAWSON.



MAIN STREET, HELENA, LOOKING SOUTH.

In 1869 the former greatness of the placers in Last Chance gulch began to wane and population here began to dwindle. In 1867 Helena contained 3,400 people. In 1876 it did not contain to exceed 2,000 people. During the years of Helena's decadence an industry was being developed in the section of country which subsequently became the best of Helena's tributary district. This was the raising of live stock. By 1878 and 1879 the live stock interests of Montana had attained proportions of considerable magnitude. A number of the wealthy cattle men of the territory selected Helena as their headquarters. These men traded with Helena and they built their homes in the town. The coming of these men with their millions of capital stimulated the growth of Helena, and by the time the tracks of the Northern Pacific railroad reached this point the town was in a very flourishing condition.

Following the period when the placers of Last Chance gulch gave out the miners of this section began to turn their attention more to quartz mining. A large number of quartz locations were made near Helena. Some of these in time proved very valuable, but before the advent of the railroad they were practically worthless as their owners were without the facilities for properly treating the ores they contained. In

1880 the Utah Northern railroad reached Montana from the south, and three years later the tracks of the Northern Pacific reached Helena. The building of these roads wrought a great change in Helena and in the section of country of which the town had long been the trading center. New mines were opened up here, old prospects which owing to low-grade or refractory ores had been deemed worthless became paying properties, and new life was infused into a rich country which had remained unoccupied for the one reason of its isolation. The 4th of July, 1883, was a memorable one in the history of Helena. On that day a train of 36 cars loaded with 1,000,000 pounds of silver bullion left Helena for the East. This shipment attracted the attention of the world, and although it was but the forerunner of many which followed it, it was one of the most effectual advertisements the city in the heart of the Rockies ever received.

PHOTO. BY LAWSON.

MAIN STREET, HELENA.

The coming of the Northern Pacific railroad at once removed all doubts regarding the permanence of Helena as a prosperous city of the West. This road opened up for the city new avenues of trade and industry and it brought it into closer connection with the large section of tributary country it had so long dealt with. At the time of the completion of the Northern Pacific to this point Helena was, as it is today, the political, judicial, financial, commercial and educational center of Montana. From 1883 to the present writing the city has made remarkable strides in a rapid increase of population and wealth. Its people now claim that it is the richest and most compactly built city of its size in the world. The wealth of the city is shown by its assessed valuation of property here in 1893, when the returns showed $20,000,000 worth of taxable property, property that was assessed at about 50 per cent. of its valuation. Dividing the $20,000,000 by 13,000, the present population of Helena, it gives a wealth per capita, based on the figures of the assessment roll, of $1,538.

Another evidence of the vast amount of capital accumulated in this city is the number and wealth of its strong financial institutions. Seven banks are now doing business in Helena. These banks have an aggregate capital of $2,325,000, a surplus and undivided profits of $1,079,646, and total deposits of $7,176,812. These are the First National Bank, with a capital of $500,000; the Merchants National, capital $350,000; Montana National, capital $500,000; Second National, capital $75,000; Helena National, capital $500,000; American National, capital $200,000; Cruise Savings, capital $100,000, and Montana Savings, capital $100,000. Deposits flow to these banks from all parts of Montana, and they form a clearing house for the vast amount of mineral wealth annually produced in the vicinity of Helena. The buildings owned and occupied by these banks are imposing five and six-story structures, constructed principally of granite and marble. The banks of no other city of the West are better housed than are the banks of Helena. During the stringency of the summer of 1893 two of the Helena banks suspended, but the assets of these banks were in the most satisfactory shape, and the suspensions, as in the case of other strong banking houses of the country, were the result of a temporary scare of the people, which the most con-

PHOTO. BY LAWSON.

A BUSINESS BLOCK, HELENA.

servative of bankers find it impossible to prepare for. The business blocks of Helena are costly, stately and modern edifices of handsome architectural designs.

The depots of the Northern Pacific and Great Northern railroads are situated in the valley, a mile or more from the business center of Helena. The traveler who alights from the train of either road at Helena, sees, first, stretches of gravel or furrowed ground, which was dug over years ago in the search for gold. Near the depots the large warehouses are located, and this is the least attractive part of the city. About half a mile from the depots the outskirts of the business and residence sections of the city are crossed. Beginning on Main street, at its intersection with Sixth avenue, and extending for half a mile towards the base of the mountains, is one almost unbroken line of substantial and elegant business houses. Many of these buildings are constructed entirely of Montana granite, quarried about three miles distant from the city. Others are constructed of marble, red sandstone and pressed brick. Several of these buildings are five, six, and even seven stories high, and nearly all are equipped with electric lights, modern elevators, and other conveniences. Scattered here and there through the city are many fine buildings, including several first-class hotels, and the $150,000 building of the Montana Club, a strong social organization of the city.

MONTANA CLUB, HELENA

The public and private improvements of Helena are on a most magnificent scale. Everywhere in the city is there this same evidence of lavish expenditure. These expensive improvements were not the result of a poorly administered city government or the squandering of public moneys. The tax rate of the city is low, being but 14 mills, while Helena's bonded indebtedness is less than $300,000. The millionaire mine owners have, in Helena, some of the finest appointed homes and most beautiful surrounding yards on the continent. The fine houses here are all of brick and stone, and the residence portion of the city vies favorably with the most select residence section of any city in the West.

PHOTO. BY LAWSON.

COURT HOUSE, HELENA.

PHOTO. BY LAWSON.

UNITED STATES ASSAY OFFICE, HELENA.

The public buildings of Helena are especially worthy of attention. The Lewis & Clarke county court house here, stands on an eminence at the head of Broadway street. It was erected at a cost of $250,000, and, as shown by the accompanying illustration, is a handsome and striking piece of architecture. It is occupied by the governor of the state, by the state and county officers, and it is here that all state and county business is transacted. A marble statue of the Father of the Declaration of Independence, Thomas Jefferson, occupies a prominent place in the lawn fronting the court house. Other fine public buildings of Helena are the auditorium, with a seating capacity of 10,000 people, a

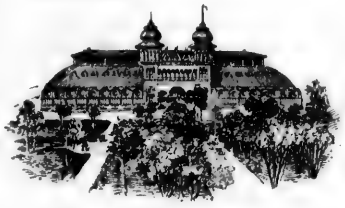
county jail, constructed of granite at a cost of $50,000, and a large brick city hall. The United States assay office is located at Helena. There were deposited in this assay office, during 1892, 68,429 ounces of gold, valued at $1,273,104, and 99,111 ounces of silver, worth $78,932, a total of $1,352,036 in precious metals handled here during the year.

PHOTO. BY LAWSON.

CITY HALL AND FIRE DEPARTMENT HEADQUARTERS, HELENA.

Helena has its fashionable West End, and in this part of the city are many elegant and palatial residences. The wealthy citizens of the city have vied with each other in erecting houses that cost tens of thousands of dollars each. These mansions do not differ materially from the class of fine houses found on Summit avenue, St. Paul, Walnut Heights, Cincinnati, Nob Hill, Portland, and the fashionable districts of other leading cities. The noticeable absence of frame structures in Helena is due to the fact that in the early history of the place the city was visited by three great conflagrations. It was the lesson learned by these great fires which was largely responsible for the adoption of brick and stone for building material here. No great fire could gain headway in Helena today, and the city is as near fire-proof as the adoption of fire-proof materials in building could make it.

PHOTO. BY LAWSON.



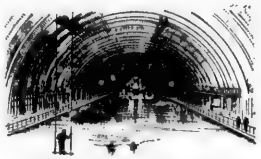
THE NATATORIUM, HELENA.

PHOTO. BY LAWSON.

A SUMMER RESORT HOTEL, HELENA.

Among the notable features of Helena are its libraries. The public library here contains 10,000 volumes of carefully selected books. This institution is supported by a tax levy of three-tenths of a mill. This furnishes a steadily increasing fund for the purchase of books. The library rooms are large and pleasant, and are located in the auditorium building. The state library here contains about 5,000 volumes. A valuable collection of books, original manuscripts, maps, etc., numbering in all 5,000 pieces, is held by the historical society's library here. The law library and the historical society are quartered in the county court house.

PHOTO. BY LAWSON.



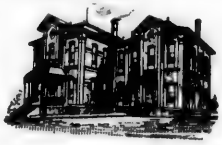
SWIMMING BATH, HELENA.

In marked contrast to the bull teams which traversed Helena's streets in the early history of the town, is the splendidly-equipped system of electric cars which now reaches to all parts of the city. The street-railway system here consists of 23 miles of electric lines. Nine miles of this track is operated by the Helena Electric Railway Company and 16 miles by the Helena Rapid Transit Company. The first-named company has in use 10 electric cars and the last-named company are now running six. Both of these companies operate a line to the natatorium, Helena's great summer resort. Over $500,000 was expended on this resort. Water is supplied here at a comfortable temperature for bathing and the natatorium is much frequented by Helena's

PHOTO. BY LAWSON

HIGH SCHOOL, HELENA.

PHOTO. BY LAWSON.



BRYANT SCHOOL, HELENA.

people and by the thousands of tourists who annually visit the city. Helena is well supplied with other places of amusement. Among these is a cozy theater, an athletic park, gun club grounds and a fast driving park at which race meetings are held twice a year.

A wandering pedagogue opened the first school in Last Chance Gulch in 1865. He did not meet with much success, because at that time there were only five or six children in the camp. The pioneer teacher, however, managed to eke out a living here by working as a stone mason during the time he was not engaged in his school duties. A remarkable transformation has been effected since the first school was opened in Helena. The city now boasts of nine public school houses, a Catholic convent and parochial school, the Montana University, several sectarian schools and two business colleges. The school property owned by the city is now valued at $432,574. The buildings occupied for school purposes represent a value of $241,809. There is invested $155,975 in realty and $34,790 is invested in the school furniture. In 1893 there were 1,823 pupils enrolled in the public schools of the city. Forty teachers are now regularly employed in these schools. The school buildings are models of architectural beauty and they are a source of great pride to the citizens. The cost of each of the school buildings here was as follows: Central, $20,000; High School, $120,000; Hawthorne, $30,000; Sheridan, $3,981; Carey, $14,682; Lincoln, $3,000; Jefferson, $15,000; Bryant, $4,000; Emerson, $20,146.

PHOTO. BY LAWSON.

KENWOOD SCHOOL, HELENA.

PHOTO. BY LAWSON.

HAWTHORNE SCHOOL, HELENA.

The Helena High School is worthy of more than a passing notice. This school occupies a beautiful granite edifice, superior in design and finish to that of any school house of the Pacific Northwest. Its exterior appearance can be judged by the illustration of it which appears in this publication. A winding granite stairway with round brass railings leads from the ground to the top floor. The different floors are supported by massive pillars of granite and sandstone richly carved. A wainscoting of porcelain-covered brick extends along the walls of the hallways, the floors of which are laid in ornamental tile. Private study rooms for the use of the teachers open off the large class rooms. The building is also supplied with a library, laboratory and gymnasium.

PHOTO. BY LAWSON.

LINCOLN SCHOOL, HELENA.

PHOTO. BY LAWSON.

CAREY SCHOOL, HELENA.

Like the schools, the churches of Helena date from an humble beginning. The first church here was a log building erected in April, 1865. This pioneer church was liberally supported by the miners who, however, seldom attended it unless a funeral or a marriage was the attraction. It is on record that the keeper of a gambling house daily eased his conscience by depositing a few dollars in gold dust in the contribution box which hung on the outside of the church, regularly after his

game was closed for the night. In subsequent years the church-going element of Helena largely increased and the tone of the city today is a distinctly moral one. The church buildings are among the most attractive edifices of the city and the congregation of each is very strong.

PHOTO. BY LAWSON.

JEFFERSON SCHOOL, HELENA.

As an adjunct to the religious organizations of the city, the hospitals and orphan asylums of Helena are well supported. The St. John's Hospital (Catholic) occupies a $35,000 building while the building occupied by St. Peter's Hospital (Episcopal) was erected at a cost of $40,000. Orphan asylums are maintained here by the Catholic and Protestant churches.

PHOTO. BY LAWSON.

EMERSON SCHOOL HELENA.

Helena is the railroad center of Montana. The city is reached by the lines of the Northern Pacific and the Great Northern railroads, and connection is also made with the Union Pacific from this point. The Great Northern gains an entrance to the city over the tracks of the Montana Central, which it controls. At Butte, 75 miles to the southwest of Helena, both the Montana Central and the Northern Pacific connect with the Utah Northern, a branch of the Union Pacific. A number of lateral lines spread out from Helena, and these roads tap the rich mineral districts in the vicinity of the city. The Helena, Jefferson, Wicks, Boulder Valley & Butte branch of the Northern Pacific runs 58 miles through a well settled mineral and agricultural district. The Helena & Red Mountain branch runs out from Helena to Rimini, a distance of 16 miles, and another branch of the Northern Pacific, called the Helena & Northern, runs to Marysville, where the great Drum Lummon gold mine is located. On the lines of the Montana Central and Northern Pacific railroads, four miles east of Helena, is Prickly Pear Junction, or East Helena. It is at this point that the extensive smelting works of the Helena Smelting and Refining Company are located. Over 300 men are employed in these works, which cost $750,000, and which have a capacity of 250 tons of ore per day. The railroad systems centering at Helena are among the most complete in the West, and the city can justly lay claim to being a great railroad center.

ENTRANCE, CEMETERY, HELENA.

Helena's water supply is obtained from creeks, which drain an area of 3,600 square miles. A large portion of this area drained is a perpetual snowshed. The available flow of water here is from 12,000,000 to 13,000,000 gallons every 24 hours. The water company at Helena has constructed storage reservoirs in the mountains back of the city. These reservoirs have a combined holding capacity of 11,000,000 gallons. Water for city use is taken from these reservoirs by gravity to the reservoirs within the city limits, from which latter it is distributed throughout the city. The waterworks plant consists of 65 miles of pipe and four reservoirs having a total storage capacity of 16,000,000 gallons of water. The pressure of water in the city mains is sufficient to throw streams over any of the tallest buildings of the city, thus saving the city the great expense of the purchase and maintenance of fire steamers.

PHOTO. BY LAWSON.

FIRE ALARM TOWER, HELENA.

The fire department of Helena consists of one hook and lad-

PHOTO. BY LAWSON.

CONGREGATIONAL CHURCH, HELENA.

der, 24 wheel hose carriages, one chemical engine, and a reserve apparatus consisting of a 75-foot aerial ladder and one steamer. The working force of the fire department consists of 75 men 9 of whom are fully paid.

The police force of Helena is well disciplined and officered. It consists of a chief and 14 patrolmen.

Until the organization of a municipal government, in 1881, Helena was ruled by the Board of Trade. This organization is still maintained and is in a flourishing condition. It numbers among its members all the substantial business men of the city. It has done much to advance the interests of the city, and is the medium through which all the business of a quasi-public nature pertaining to Helena is transacted.

The climate of that part of Montana in which Helena is located is perfect. The dry atmosphere of the Rocky Mountain districts is highly beneficial to invalids. Pulmonary troubles are practically unknown in the vicinity of Helena. The city is located in a sheltered nook of the mountains, at an elevation of 4,200 feet above sea level. It offers many advantages both as a place of residence and as a resort for tourists and invalids. The summers here are cool and pleasant. The heat of even the days when the thermometer gets the highest, is not oppressive. During the winter months there are, at times, some extremely cold days, but the absence of moisture in the atmosphere has a remarkable influence in tempering the keenness of the cold, and even during the coldest days people go on the streets without discomfort. The meteorological records at Helena show that for a period of eight years the city enjoyed an average of 281 fair days each year during that time. Within easy distance of Helena are a number of mineral springs whose remedial properties have been known for years. The greatest of these springs are the White Sulphur, in Meagher county, the Jefferson, Clancy and Boulder warm springs of Jefferson county, the warm springs in Deer Lodge county, and Hunter's hot springs in the upper Yellowstone valley. The last named springs have identical properties with the famous hot springs of Arkansas, and the minerals of these springs are almost a sure specific for the cure of diseases resulting from any form of blood poisoning.

PHOTO. BY LAWSON.

METHODIST CHURCH, HELENA.

TEMPLE EMANUEL, HELENA.

Lying within a radius of 80 miles of Helena are bodies of silver and gold ores of inestimable value. Centuries of constant working will not exhaust the riches of these vast deposits. On the bunchgrass ranges of Montana are vast herds of cattle and sheep which contribute directly to Helena's wealth and prosperity. In the pocket gulches of the mountains within easy distance of Helena, are large quantities of precious stones. Among these deposits is that of Eldorado bar. The sapphire fields here are now being worked by an English company. This company is capitalized for $500,000, and the work it is handling at Eldorado bar is yielding large returns. Near Helena are deposits of the best clay for making brick, terra cotta and pottery, as well as quarries

PHOTO. BY LAWSON.

CHURCH OF THE SACRED HEART, HELENA.

of numerous varieties of the most durable and most valuable of building stone. In addition to these great sources of wealth, Helena has the advantage of being located near the geographical center of Montana, thus making it the most convenient point to reach from all parts of the state.

ST. PETER'S EPISCOPAL, CHURCH. HELENA.

In the tributary district to Helena new mines are being constantly opened. These mines, as soon as their value is determined, are bought up by the rich syndicates. The opening of a new mine on a large scale calls for the investment of thousands of dollars, and already millions of dollars are invested here in mines and mining machinery. Helena is the center of one of the greatest mineral-producing sections of the world, and the handling of this vast mineral wealth has made this city one of the greatest commercial centers of the West.

LUTHERAN GERMAN CHURCH, HELENA.

Rimini, Montana.—Rimini, an important mining town of Montana, is situated in the center of an important mining district, 16 miles southwest of Helena. It is the terminus of the Helena & Red Mountain branch of the Northern Pacific railroad.

Rimini is picturesquely located at the base of Red Mountain and near the junction of Ten Mile and Beaver creeks, two swift-flowing mountain streams. A mile to the west of Rimini is the Lee Mountain mine, owned by the Consolidated Ten Mile Mining & Reduction Company. It is a gold, silver and lead property with 2,000 feet of developments. The main tunnel is 960 feet in length and the other tunnels are 700, 400, 300 and 340 feet. The ore in this mine is found in a fissure vein over 30 feet wide, in Syenitic granite. It is a low-grade concentrating ore, running from $20 to $30 to the ton.

Another mine at Rimini owned by the same company is the David Stanton. This contains ore averaging 40 ounces in silver and 40 per cent. lead and $5 in gold. South of Rimini is the Red Mountain group of mines. These consist of the American Flag, Eureka, Northern Pacific and other developed and working properties. South of these mines on the same mountain are the Good Friday and Nellie Grant. On Providence Hill near Rimini are the Vautour and Peerless Jenny mines, both of which are heavy silver producers. Rimini will eventually become a much larger and more important mining center than it is today. There are some very rich gold properties near the town still undeveloped and in the vicinity of the place are some of the most promising prospects of Montana.

Rimini now contains a district school, two churches, a hotel and several well stocked mercantile stores. Its population is about 350. The creeks in the vicinity of the town furnish good trout fishing and large game is found in the neighboring hills. A single carload of ore from the Vautour mine here yielded $3,900 and large bodies of ore in the Peerless Jenny have assayed from 250 to 600 ounces in silver. This can be taken as evidence of the richness of the mining district tributary to the town and of the resources on which this flourishing little place relies for support.

Wicks, Montana.—This town occupies a commanding position in the center of a large and rich mineral district. It is the terminus of the Helena & Jefferson

branch of the Northern Pacific railroad and it is also a station on the line of the Montana Central.

Wicks is located in Jefferson county, 10 miles northwest of Boulder and 25 miles south of Helena. It now contains a population of about 600. It has excellent public school facilities, good churches, well conducted hotels and the usual number of stores found in a place of this size.

Located near Wicks are the large mines of the Helena Smelting & Refining Company, which are locally known as the Hauser properties. The mines owned by this company here are the Alta, Comet, Northern Pacific, Gregory and Banner. The Alta is the largest and best developed mine of the group. Its main shaft is down 1,000 feet and it has ten levels with developments of over 1,200 feet each. The ore chutes in all these levels run low in grade but are extensive, varying from 15 to 24 feet in width. The mine is connected with a concentrator located at Corbin by a narrow-gauge railroad 3½ miles in length. The concentrated ore from the Alta mine averages 29 ounces in silver and 50 per cent. lead to the ton. The Comet is developed by a shaft 500 feet deep and by five levels. It is connected with the smelter at Wicks by a bucket tramway 4½ miles in length. The Comet is an average-grade mine. Of the other mines of the group, all of which are well developed, the Custer is the most valuable and the one of best promise.

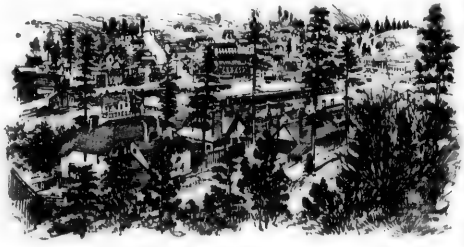
At Corbin, two miles distant from Wicks, is the Rumley mine. The shaft of this mine is now down 350 feet. The ore is a sulphide running about 12 per cent. lead, 30 ounces in silver and $3 per ton in gold.

Among the other mines in the vicinity of Wicks are the Munich, Pen Yan, Blue Bird, Weiser and the Kennedy group near Clancy. In the Sterling mine at Clancy two leads of high-grade galena ore have been opened up. The ore runs 90 ounces in silver and $6 in gold per ton. There are also a number of gold properties near Wicks which are in various stages of development. The Basin mining district is directly tributary to Wicks. The latter is one of the most promising mining districts of Montana. The trade of Wicks is altogether with a mining section of country and it enjoys all the prosperity which attaches to a mining section when all the mines are being worked.

Marysville, Montana.—Marysville, one of the most important mining towns in Montana, is situated on Silver creek, 21 miles north of Helena. It is reached by the Montana Central railroad, and it is the terminus of the Helena & Northern branch of the Northern Pacific.

Placer gold was discovered on Silver creek in May, 1864. In subsequent years the diggings here yielded a large amount of gold. Following the working out of the Silver creek placers miners began to seek for the quartz ledges which it was known must exist in the vicinity of the former rich placers. In 1876 Thomas Cruse, now a well-known banker of Helena, found the ledge of the famous Drum Lummon mine. This mine is now the greatest gold producer in Montana. Early in 1883 Mr. Cruse sold this

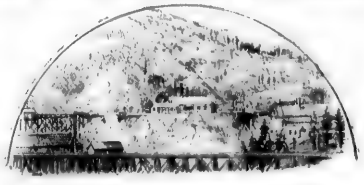
PHOTO. BY HALL.



MARYSVILLE, MONTANA.

mine to an English syndicate for $2,500,000, who organized under the name of the Montana Company (Limited) stocked for 600,000 shares of a par value of $5 each. Up to January, 1892, this mine had produced 494,838 tons of ore, from which $5,675,298 in gold and $3,593,228 in silver, a total of $9,268,526, had been taken. The average value of the ore taken from the Drum Lummon has varied greatly since it was first worked. In 1883 the ore averaged $65.63 per ton. In 1890 it averaged $13.43, and in 1892 but $7.43. The total underground development in this mine represents 45,000 lineal feet, or about 8½ miles of drifts, shafts, crosscuts and tunnels. The miners operate through a tunnel 1,200 feet long, which cuts the vein 400 feet from the surface. From the level of this tunnel two shafts have been sunk and these shafts have now reached a depth of over 1,400 feet below the surface. There are two mills on the property, one of 50 and the other of 60 stamps. In the smaller mill the stamps weigh 900 pounds each and drop 96 times a minute. Each of the stamps of this mill crushes about 2¼ tons a day. The other mill cost $140,000 and its stamps weigh 620 pounds each and drop 94 times a minute. The total engine capacity of the Drum Lummon plant is 2,435 horse power. The vein of this mine is a true fissure and extends north and south through slates and near a contact of granite and slate on the footwall side. On the hanging walls is a porphyry dyke, which is regarded as influencing the formation of ore bodies. The ore is not continuous in the vein, but occurs in shoots. Between these shoots the vein is barren and is in some places pinched to a mere seam. The ore shoots vary from 5 to over 30 feet in width.

About 300 men are employed in the Drum Lummon, and it is this mine which practically supports the town of Marysville. The population of Marysville is about 1,500. In addition to this mine, however, the town has other resources, the development of which will prove an important factor in the growth of the place. Within a radius of eight miles of Marysville are numerous silver and gold claims, which can be made good paying properties. On the foothills of Mount Belmont, a short distance from Marysville, are the Penobscott and Whipperville mines, both of which have been good producers and are still valuable mines. Other mines in this locality are the Blue Bird, Hickey and Belmont. Three miles from Marysville are the properties of the Bald Butte Mining Company. These consist of the Black, Douglas, Albion, Genesee, Sterling and Kenawa. The Albion is developed with a shaft 200 feet deep and six working tunnels. The ore from this mine runs about $32 a ton. Since July, 1890, it has yielded $390,000. Next in point of development in this group is the Genesee, which has a shaft 250 feet deep and about 1,200 feet of tunnels. The ore is free-milling gold, running about $34 to the ton. It is found in a solid vein from 5 to 24 feet wide. The Bald Butte Company operates a 20-stamp mill, with a crushing capacity of 30 tons a day. Development work has been done on the other four mines here opened by this company.



DRUM LUMMON MINE, MARYSVILLE

In the vicinity of Marysville are other numerous quartz mines, many of which it is believed will become dividend-paying properties. As with every other mining district, capital is needed here to develop rich claims now lying idle.

Marysville occupies an attractive site in a narrow valley at the base of a spur of the Rocky Mountains. A few hundred feet up the mountain side is the shaft-house

of the Drum Lummon mine, immediately under which, on level ground, are the stamp mills to which the ore is sent down in a chute. Scattered through the town are many cosy cottages and several brick business blocks. Two good public schools are maintained here, and three strong church organizations are supported in the town. Marysville presents a more attractive appearance than do most mining camps. The streets are graded, good sidewalks have been laid and the town is lighted by electricity. A system of water works supplies the town with the best of water, taken from the springs and creeks in the vicinity. Marysville has daily stage connection with Empire via Gloster. The place is a prosperous mining camp and a trading center that claims for the town considerable commercial importance.

Butte, Montana.—Situated at an altitude of 5,700 feet above the sea level, on the western slope of the main divide of the Rocky Mountains, is Butte, the largest city in Montana and the greatest mining camp in the world.

CROSSING "THE PLAINS" TO MONTANA.

Nearly all mining camps consist of a motley collection of cheaply constructed buildings, but Butte is a city possessing every metropolitan feature and with a population of 35,000 energetic and public-spirited people. It is a place without parallel in America. Underlying the city and its environs are apparently inexhaustible bodies of copper and silver ores. The whole district of which Butte is the center is a network of mineral veins. The site occupied by Butte is a part of the great mineralized area, nearly all of which, under favorable circumstances, could be profitably mined. A shaft could be sunk in almost any of the back yards of the city and a body of ore encountered. In the very heart of the city, at the rear of some of the imposing business blocks, are developed mines with their shaft houses and hoisting engines. This peculiarity of Butte at once impresses the stranger with the fact that he is in a great mining camp, and that perhaps under his very feet lies hidden the wealth of a Crœsus. With this evidence of mining before his eyes, however, he notes on all sides every evidence of a great city, and he finds here, a thousand miles or more from the Pacific ocean, one of the great inland cities of the continent.

PHOTO. PALAIS STUDIO.

BUTTE, IN 1875.

The bonanza mines of Butte are the greatest copper producers in the world. Of the silver and gold mines here, there are a score or more whose annual output aggregates millions of dollars. In this district over 4,000 miners daily descend into the very bowels of the earth and extract from the storehouse of nature here thousands of tons of copper and silver ores. In addition to this large force of men, 5,000 others are employed in various capacities about the mines and in the great smelting operations about this point. These men and the other wage earners of Butte are paid about $1,300,000 monthly. Nearly all of this immense sum is expended with a lavish extravagance peculiar to mining camps and, to the average man who has been brought up in the midst

PHOTO. PALAIS STUDIO.

VIEW OF BUTTE

of the petty economies of the people of the Eastern states, the manner of spending money in Butte by even the common laborer is a revelation.

Butte claims to produce more wealth and to expend more money *per capita* than does any other city of equal population in the world. Within a radius of two miles from the court house here, ores of the enormous aggregate value of $26,000,000 are annually dug out of the earth. Were this great annual revenue equally divided among the inhabitants of Butte, every man, woman and child in the city would receive the snug little sum of $800 a year. The production of this wealth and the distribution of a large part of it in wages has given Butte characteristics possessed by no other city in America, and a reference to the idioms of the people will not be found devoid of interest in the present article.

PHOTO. PALAIS STUDIO.

BUSINESS CENTER, BUTTE.

On the streets of Butte may be seen all the characteristics and picturesque phases of mining life, together with the scenes incident to an industrial and commercial center of prominence. Situated on the hills, within the corporate limits of the city, are the large red-painted shaft houses of some of the greatest producing mines in America. Along the railroad tracks at the foot of the city and on the uplands of the suburbs are smelters to which are carried for reduction not only the product of the many mines in the vicinity of Butte, but also ores from other mineral properties of distant Washington, British Columbia and even Alaska.

PHOTO. PALAIS STUDIO.

PARK STREET, BUTTE.

Before becoming the center of great quartz mining operations, Butte was for some time a rich placer camp. In the early 60's, at a time when thousands of men were washing gold from the sands of Alder gulch, a party of hardy and adventurous fortune seekers pushed their way over the main divide of the Rocky Mountains and discovered, in the vicinity of the site on which Butte now stands, the rich placer mines on Silver Bow creek. Shortly after the advent of these men, others followed, and by the fall of 1864, hundreds of miners were working the Silver Bow placers. The camp that sprung up at this point derived its name from a solitary and picturesque mound or butte which rises from Silver Bow valley, in front of the present imposing city.

The placers at Butte proved very productive, and for some years this settlement, together with the flourishing camp of Silver Bow, was in a flourishing condition. As was the case in all the camps of Montana during the early days of the country's history, food supplies brought fabulous prices. Flour sold for $100 a sack, eggs brought $1 apiece, apples were scarce at 50 cents each, and grapes sold readily at $10 a pound. At even these prices for the necessaries of life, the miners did well, and many a fortune was taken out of the placers here by the miners of 30 years ago. The yield of all placer mines in this district, from 1862 to 1868 inclusive, was $13,-

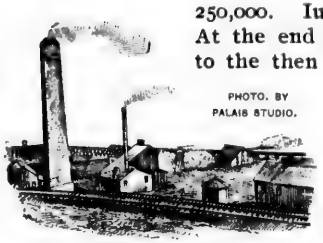


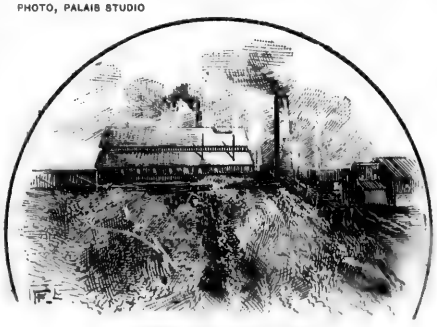
PHOTO. BY PALAIS STUDIO.

SILVER BOW.

250,000. In 1867 Butte, as a placer camp, reached its climax. At the end of that year its future doubtless seemed as hopeless to the then residents of the city as did the outlook of the Montana mines during the great agitation of the silver question last year. The people who had braved the hardships to reach this point in their search for fortune, were not the men to be deterred by adverse circumstances in their career, and the men who have built a city at this point are not the men who will allow their present great interests at Butte to long remain idle, even should the world demonetize silver as a medium of exchange.

After the placer mines at Butte were practically exhausted, the town was almost deserted. The few years immediately following 1864 saw a revival of the old-time excitement in the town, and in the early 70's Butte took a start which has built here one of the most progressive cities of the continent. The first quartz location (from heresay evidence) was made north of the present city, in August, 1864. Today over 4,000 claims have been filed in the city and its immediate vicinity. Prior to 1875 quartz claims were located here only for the gold they were supposed to contain. No development work worthy of note was done on these claims, and the knowledge of the large deposits of rich copper and silver ore hidden but a few feet below the surface was reserved for a later generation. In that time there were no facilities for treating the ores of these ledges, and there was but little prospect of the establishment of smelters and stamp mills here, owing to the then isolated condition of the entire country. In those days prospects that have since proved immensely valuable sold for a few dollars. As an instance of the lack of confidence felt in the quartz ledges here during the early history of the camp, it can be stated that the Lexington, which is now one of the greatest silver-producing properties in Montana, was purchased, by the late millionaire, A. J. Davis, in the early 70's, for a $20 horse. This same mine was afterwards sold by Mr. Davis, to a French company, for $1,000,000. Other valuable claims here were traded by their original owners for a sack of flour and a piece of bacon.

PHOTO, PALAIS STUDIO



MOULTON MILL AND SMELTER, BUTTE.

In the fall of 1875 a number of the old abandoned quartz claims were re-located by parties who had learned of their value, and it soon became rumored abroad that the black ledges of Butte were rich in silver and copper. This discovery of the value of these ledges soon attracted the attention of prospectors, and hundreds of men eager to investigate the merits of the new field journeyed across the mountains to Butte, which, in a few months' time, again became the mecca of Western mining men. In 1876, the building of the Centennial, Dexter, Burlington and Lexing-

PHOTO. PALAIS STUDIO.

PARROT SMELTERS, BUTTE

ton mills here for crushing ore, greatly facilitated mining operations at this point, and soon after the completion of these mills, Butte became one of the most promising mining centers of the West. From that time until the completion of the Union Pacific to this city, in 1881, the camp steadily advanced.

In the spring of 1881 Butte was incorporated with a population of about 3,000. It was about this time that the extensive development of mining properties was begun here, as well as the erection of large smelters and quartz mills. With the coming of the railroad and the building of the great smelters, Butte emerged at once from the uncertain condition of a primitive camp, with an unsettled and turbulent population to the dignity of a city. Its growth, the development of its mines, their production of wealth and the prosperity of the city from that time to the present have been phenomenal, and scarcely without parallel in the rise of modern cities.

Soon after the completion of the Union Pacific to this point the Montana Union was finished to Butte. This latter roads connects Butte and Garrison, 51 miles distant, where a junction is made with the main line of the Northern Pacific. At a later period the Great Northern completed its main line to Butte, and in 1890 the Northern Pacific constructed a "cut-off" from Logan in the Gallatin valley, via Butte, to Garrison. The latter company now runs one of its overland passenger trains through Butte. It will thus be seen that with three great transcontinental lines of road passing through or terminating at Butte, the transportation facilities of the city are not excelled by those of any other city of the west. The volume of business regularly handled by these railroads at Butte aggregates millions of dollars annually, and this business furnishes a good illustration of the city's prosperity. Forty-six trains now leave or arrive at the various depots of Butte every 24 hours, of which 20 are passenger and 26 freight trains. These trains, it is estimated, carry on an average 1,000 people in and out of the city. The annual receipts of the railroads from the freight business of the city approximates about $5,000,000 a year.

PHOTO. PALAIS STUDIO.

COLORADO CONCENTRATOR, BUTTE.

PHOTO. PALAIS STUDIO.

CATHOLIC CHURCH, BUTTE.

The site occupied by the city of Butte, begins in the valley of Silver Bow creek, where are situated the railroad yards, and extends by an easy grade to the top of one of the foothills of the Rocky Mountains. On the crest of the highest hill of the city the shaft houses, concentrators and rock piles of the chief mines stand out in bold relief. Back of these mines are the suburbs of Centerville and Walkerville, both lively and picturesque places, presenting interesting scenes typical of mining life. From the crest of the hill here a delightful view is obtained of the densely built city lying hundreds of feet below. Ten miles to the east from this point is the rugged slope of the main divide of the Rockies. Extending in front of the city is Silver Bow valley, from which rises the bare, cone-shaped butte which gave the name to the city built near it. Beyond the valley rise the

PHOTO. PALAIS STUDIO.

SCANDINAVIAN M.E. CHURCH BUTTE.

snow-capped peaks and bleak slopes of broken ranges and the Rocky Mountains. To the west of the city the monotony of bleak and rocky hillsides is broken by numerous prospect holes and shaft houses. Here, on all sides, there is evidence of man having endeavored to make the earth reveal here the hidden sources of its treasures. Some of these early seekers worked for months in digging, only to be rewarded with failure. Others, more fortunate, sunk shaft holes only a few feet distant from barren places, only to find rich croppings which finally resulted on a later development in their becoming millionaires.

Main street, one of the principal business thoroughfares of Butte, extends from the valley below to the crest of the hill, and from this latter point to Walkerville. Along this street are many five and six-story business blocks, all of which equal in construction and appointments the largest structures of any Eastern city. A cable line runs on this street from the depot to Walkerville, a distance of three miles. Nearly all parts of the city are reached by splendid rapid-transit lines of road. This system is controlled by the Butte Consolidated Railway Company. The system consists of 15 miles of track, 1½ miles of which are cable, and the remainder is operated by electric power. These lines carried in 1892 1,500,000 passengers, out of a population of 35,000, an average of 43 rides to each resident of the city.

PHOTO. PALAIS STUDIO.

EPISCOPAL CHURCH, BUTTE.

Crossing Main street about midway up the hillside, are the four other business streets of the city. These streets are named respectively, Mercury, Park, Broadway and Granite. All of these streets are constantly crowded day and night with representatives of nearly every nationality, and it is this cosmopolitan and picturesque mass of humanity, its lavish expenditures for amusements and the luxuries of life, and the resorts that are supported by it, that has made Butte famous as the liveliest city in the union.

One reason for the flourishing condition of affairs at Butte is the fact that nowhere in America are laboring men paid as high wages as they are in Butte. Here the common laborer receives $3 a day for his work, while the miners are paid from $3.50 to $5 a day, and skilled mechanics from $4 to $8 a day. This scale of wages is maintained and protected by the labor organizations of Butte, organizations that have a total membership of 8,323.

Butte is distinctly a well governed city. It is remarkably free from the depredations of the lawless element, which is held in subjection by a well disciplined police force consisting of 28 patrol men, a chief and a marshal. The city hall is a handsome four-story brick structure occupied by the police department and the officers of the city. The mayor of Butte is Eugene O. Dugan. The career of this gentleman is an illustration of the rapid advancement made by men of integrity and worth in the West. Mr. Dugan was born in St. Johns, New Brunswick, on March 24, 1862. He attended the public schools of his native city and after a brief business experience there he moved to Butte in 1884. Shortly after his arrival in Butte the citizens of the second ward elected

PHOTO. PALAIS STUDIO.

HON E. O. DUGAN, MAYOR, BUTTE.

him a representative in the city council. Other honors were bestowed on Mr. Dugan and in April, 1893, he was elected mayor of the city, defeating his republican opponent by a large plurality. He is now the senior member of the firm of Dugan & Jones, insurance and financial agents.

Among the public buildings of Butte is the county court house, a stately edifice occupied by the county officials of Silver Bow county, of which Butte is the seat of justice. Another handsome structure recently completed at a cost of $75,000 is the Butte Public Library building. This library contains over 15,000 volumes of carefully selected literature and is a fitting refutation of the charge sometimes made in the past that a mining town does not contain a cultured people with social and literary aspirations. Of the other fine buildings of Butte are several first-class hotels, a costly opera house and numerous brick and stone business blocks.

PHOTO. PALAIS STUDIO

COURT HOUSE, BUTTE.

A peculiarity about the dwelling houses of Butte is that most of them, while small but cozy cottages, occupied by workingmen, are furnished with costly furniture and the appointments of elegant homes. The high wages paid here have allowed the workingman to live in a manner undreamed of by his less favored co-worker of the East. Although small houses predominate here there are many palatial homes scattered over the city. There are also maintained in Butte three social clubs or organizations which enjoy a wide reputation for hospitality and which afford their members all the comforts afforded by any of the best maintained clubs of the East. These clubs, the Irish-American, Oro Plata and Silver Bow occupy apartments fitted up in an expensive manner and the doors of all these clubs are always open to the stranger or the tourist visiting Butte.

During the financial crisis of 1893, when frightened depositors gathered around the paying-tellers' windows of hundreds of banks throughout the United States and forced many of the strongest financial institutions to suspend payment, the people of Butte, having the utmost confidence in the soundness of their local banks, refused to withdraw their deposits. This confidence was not misplaced, for during the eventful period there was not a single bank failure in Butte. The banks of the city are the First National, with a capital and undivided profits of $1,000,000, the Silver Bow National, with a capital stock of $100,000 and a surplus and undivided profits of $300,000, the State Savings Bank, with a capital stock of $100,000 and a surplus and undivided profits of $30,000. In addition to the above are the private banking houses of W. A. Clark & Bro. and Hoge, Brownbee & Co., both of which have at their disposal over $1,000,000.

The educational facilities of Butte, both public and private, are equal to those of any city in the progressive West. The history of the public schools of Butte is but a repetition of the history of the city itself. From an humble beginning in 1866 the public school system has grown here until it is now a crowning monument to the intelligence and public spirit of the people. There are today 16 public schools in Butte and its suburbs, and the school property here is valued at $200,000, exclusive of the cost of the ground the buildings occupy. These consist of a large

PHOTO. PALAIS STUDIO.

PUBLIC SCHOOL, BUTTE.

PHOTO. PALAIS STUDIO.

SOUTH SCHOOL, BUTTE.

brick high school, erected at a cost of $80,000; three handsome 12-room buildings, modern in design and equipment, and nine smaller buildings. The total enrollment in the public school shere in 1892 was 3,643, which was an increase of 600 over the total number of pupils enrolled the previous year. The course of instruction in these schools corresponds with that of the best public schools of the East. In the primary department there is a kindergarten system. The grammar course is the same as pursued elswhere, and the high school gives a pupil a thorough preparatory collegiate course. In addition to the public school system of the city is a Catholic parochial school, which occupies an $80,000 school building.

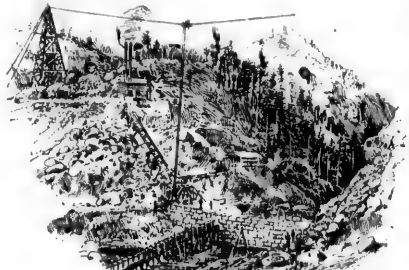
The spiritual welfare of the citizens of Butte is cared for by 15 church organizations, nearly all of which occupy imposing edifices. These churches have over 10,000 communicants, and own property valued at $375,000.

A description of the water-works system of a mountain city near where there are no large lakes or streams may prove interesting in connection with this article. The Butte City Water Company has, within the past two years, entirely rebuilt and remodeled the water-works system of the city. The source of supply of this water is the melting snows of the mountain, augmented by springs and creeks, a source that insures the absolute purity of the water. The company is now constructing a masonry dam 120 feet in height and located about 13 miles south of the city. This will dam the waters of Basin creek at its junction with Bear creek and, when completed, will form a storage reservoir with a holding capacity of many million gallons of water. This water will cover an area of 130 acres, and its greatest depth will be about 100 feet. The reservoir supplies water by gravity to the highest point on Broadway street. From that point it is pumped twice in order to reach the most elevated sections of the city and to supply the large mining properties to the north of Butte. This water is carried from the reservoir to within three miles of the city in a 24-inch banded redwood pipe. The remaining distance, owing to the heavy pressure of the water, it is conducted through a wrought-iron pipe. The redwood main is constructed of California redwood staves, banded together with steel bands, and it is capable of withstanding a maximum pressure of 200 feet.

PHOTO. PALAIS STUDIO.

24-INCH REDWOOD MAIN FROM RESERVOIR TO CITY WATER WORKS, BUTTE.

PHOTO. PALAIS STUDIO.



DAM, WATER WORKS, BUTTE.

The street pipe system is built of Kalowein pipe, varying from 6 to 20 inches in diameter. Mains are laid on all the principal streets, and there are 132 double fire hydrants located at various points throughout the city. The pressure on these mains

varies from 65 to 175 pounds per square inch. A pumping station located on Galena street takes the water from the gravity system and pumps it into what is known as Elevation 6,000, from which it is repumped to give a fire pressure at an elevation of 6,300 feet. The paid and volunteer fire department of Butte, with apparatus consisting of two fire engines and two trucks and five hose wagons, furnishes ample protection to the city against fire.

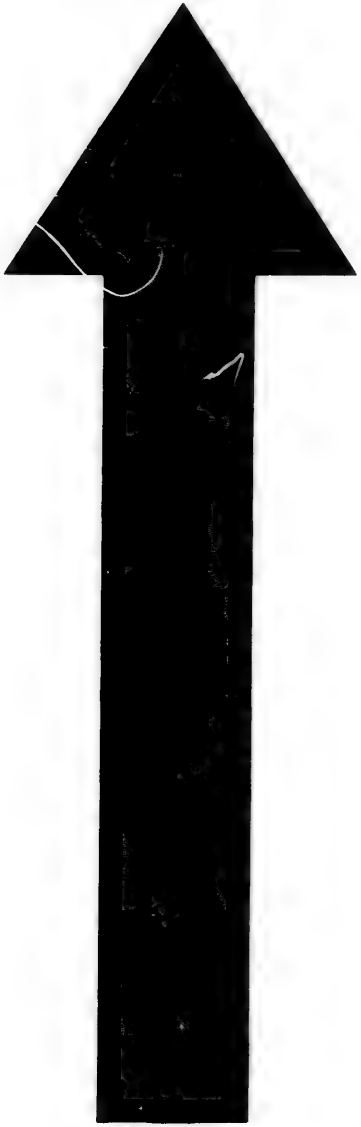
Butte is lighted almost exclusively by electricity, although the city also boasts of a good gas plant. There are in use here 15,000 incandescent lights and 250 arc lamps. In addition to surface lighting, some of the underground workings of the largest mines are lighted by electricity generated in the shaft houses.

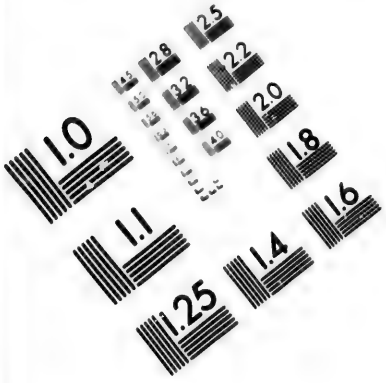
PHOTO. PALAIS STUDIO.

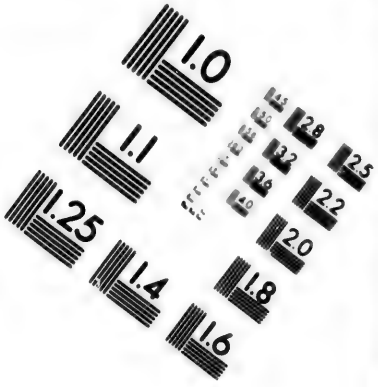
CHIEF SKEEAS, CREE INDIANS, MONTANA.

The permanence of Butte's mineral resources is now conceded. Unlike other mining camps that have sprung up in a month, produced their millions in an incredibly short time and then faded away into oblivion, Butte, with her practically inexhaustible veins of copper and silver will, probably, 100 years hence still be the center of vast mining operations. Copper is, today, king in Butte. From the mining of this mineral the city derives the greater portion of its revenue. Over $600,000 is paid out monthly here to the employes of copper mining and smelting companies. There are millions of dollars invested here in silver properties, but if, by any misadventure, the white metal should even be no longer an article of commerce Butte from her other resources, would still remain a wealthy and prosperous city.

The mines of Butte are annually adding to the wealth of the world many millions of dollars. For the 12 years ending with 1892, the total production of these mines amounted to the enormous sum of $176,707,600. This output by years is as follows: 1881, $1,247,600; 1882, $2,100,000; 1883, $4,160,000; 1884, $6,720,000; 1885, $11,479,000; 1886, $13,246,500; 1887, $18,275,000; 1888, $22,186,000; 1890, $25,900,000; 1891, $26,250,000; 1892, $28,000,000. At no other place on the surface of the globe does so small an area as that of the mining district here yield from the storehouses of nature such vast annual sums of wealth. The greatest of the mines here are the famous Anaconda group, managed by the well-known millionaire, Marcus Daly. These mines are copper producers, but their output in silver amounts to many thousands of dollars a month. The Anaconda Company own the Anaconda, St. Lawrence, Mountain Consolidated, Wake Up Jim, Green Mountain and other properties, nearly all of which are located within half a mile of the business center of Butte. The average daily output of these mines is about 5,000 or 6,000 tons. This ore is shipped to Anaconda, where the company operates extensive reduction works. The reduction works of Butte and Anaconda together represent an invested capital of







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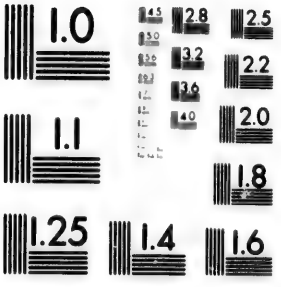

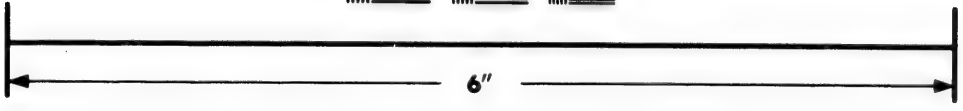

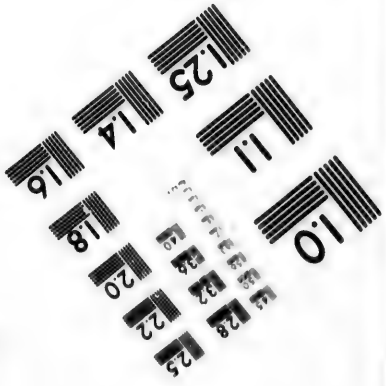

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$12,000,000, which in itself is an assurance of the confidence of the mine owners in the permanence of the great bonanzas of Butte.

The Anaconda and St. Lawrence, two of the greatest copper mines in the world adjoin each other on the same vein. The underground workings of both are lighted by electricity. The main shafts of these mines are 1,000 feet in depth and the veins are from 60 to 100 feet in width. The Mountain Consolidated, another of the Anaconda group, is a copper and silver producer, and is developed by a 1,000 foot shaft and by numerous cross-cuts and levels. The vein of this mine is about 60 feet wide, and the daily output is about 1,200 tons. The Green Mountain, Wake Up Jim, High Ore and Modoc all belong to the Anaconda Company and are situated just east of the Mountain Consolidated. These properties are all in operation and are supplied with the latest improved machinery.

Next in size to the Anaconda are the Boston & Montana Company's possessions, consisting of 38 mines and two smelters, having a daily combined capacity of 450 tons. This company also operates a smelter at Great Falls having a capacity of 1,000 tons. Of the claims owned by this company only six are developed. These are the Mountain View, East Colusa, West Colusa, Harris Floyd, Moose and Badger State. Of the six the Mountain View is the most promising. It is developed by a 1,000 foot shaft from which cross-cuts and levels have been extended to the north and south veins, each of which is from 30 to 40 feet wide, from the 500-foot level to the bottom. It is estimated that there are now more than 1,200,000 tons of ore in sight in this mine. The two Colusa mines are next in importance belonging to the company. In the East Colusa a body of copper ore 60 feet in width has been opened up, while in the West Colusa two bodies the combined width of which is about 70 feet, have been explored to such an extent that 1,000,000 tons are now exposed. The Harris-Floyd is another good property from which the company derives a large amount of revenue. It was purchased for $150,000 and is now valued at $1,500,000. The Moose and Badger State are both smaller properties, but are fast being developed into great mines. There are now over 1,500 men on the payroll of the Boston & Montana Mining Company. The dividends paid by the Butte mines of this company up to the first of December, 1892, amounted to $2,075,000.

PHOTO. PALAIS STUDIO.

CREE INDIAN CAMP, NEAR BUTTE.

Another large corporation operating here is the Butte & Boston Company. Besides a 40-stamp mill and a well appointed smelter the company owns 33 mines, all of which produce when the ore is desired. The principal mines worked by the company are the Silver Bow, the ore from which is mostly copper; the Belle of Butte (silver); the East and West Grey Rocks (silver and gold) and the La Platte, containing gold and silver. The output of these claims keeps both the mill and smelter in constant operation. The smelter owned by this company has a daily reducing capacity of 400 tons. There are about 500 men on the payroll of this company. The amount of money regularly paid out to these men in wages foots up to over $60,000 a month.

Next in size to the Butte & Boston is the Parrot Copper & Silver Mining Company whose possessions consist of a smelter having a daily capacity of 400 tons per day, and four good mines, all located at Butte. The amount of fine copper turned out by this company each month amounts to about 2,000,000 pounds, and the monthly output in silver is valued at about $60,000. The company employs about 400 men. The dividends paid by this company up to the first of December, 1892, amounted to $1,800,000.

The Colorado Copper & Silver Mining Company owns and operates a smelter here having a capacity of 150 tons a day, together with about six good mines, all of which are now producing a large amount of high-grade ore, carrying copper, silver and a small percentage of gold. Of the mines belonging to the company, the Gagnon, located right in the heart of the city, is the most productive. This mine is developed by a 1,000 foot incline shaft and numerous cross-cuts and levels. The monthly output of the company is approximately 200 tons of matte, containing 70,000 ounces of silver, 150 ounces of gold and 100 tons of copper. In addition to the smelter, the company also operates a 100-ton concentrator. The company employs about 300 men in its various departments.

INDIAN SQUAW, MONTANA.

Among the copper producers of Butte are the Butte Reduction Works, owned exclusively by W. A. Clark. The ore on which the works are kept in operation comes from Mr. Clark's mines, of which there are about 14, all producing properties. The daily capacity of the smelter is 400 tons, 200 tons of which passes through the concentrator, while the remainder is reduced in blast and reverberating furnaces. These works furnish employment to over 150 men.

The largest silver producer in the camp is the Alice Company. The Alice mine has reached a depth of 1,300 feet, at which depth ore bodies are showing up very rich veins. At intervals of each 100 feet from the surface, both the north and south veins have been explored and have shown remarkably large reserves of sulphuret ore. Besides the Alice proper the company owns nearly 15 other mines, of which several are producers. The annual output of these mines is over $700,000, and the working force employed here averages between 300 and 375 men. The dividends paid by the Alice up to the first of December, 1892, amounted to $975,000.

The silver and gold-producing properties of the Blue Bird Mining Company, consisting of the Blue Bird, Mono and Poorman mines, are located about two miles west of Butte. The ore from the Blue Bird averages about 50 ounces in silver and $8 in gold, and is free milling. The company operates a 90-stamp mill, and employs about 350 men.

The Lexington company is also a large gold and silver producer. Its property is located just north of the city limits, and consists of the Lexington, Allie Brown and other mines, and has a 60-stamp mill having a daily capacity of 85 tons. On the Lexington proper, a shaft has been sunk to a depth of nearly 1,480 feet, which is deeper than any other shaft in the camp. Like the other large mines in the district, the Lexington contains a north and south vein, from which millions of tons of ore have already been extracted. The pay-roll of the company averages about 240 men, who receive, in the aggregate, about $27,000 in wages per month. Up to the 1st of December, 1892, the total dividends paid by the Lexington amounted to $609,000.

There are a great many other valuable producing mines near Butte, but space will not permit a description of these mines. The combined number of mines owned and operated by corporations in Butte, today, exceeds 230, in addition to which there about 300 more being worked by individuals. All of these mines. when sufficiently developed, become heavy producers, and thereby add much to Butte's wealth and prosperity.

The formation around Butte is granite, with occasional porphry, and all veins run east and west, dip towards the south, and are true fissures. Unlike those of other mining camps, the veins of the Butte mines are numerous, and run parallel to each other at a distance of from 50 to 150 feet apart. They vary in width from 10 to 100 feet, and seem, as they appear in granite, like vast channels filled with argentiferous or scrupiferous ores. The ore occurs in shoots, usually varying in length from 100 to 1,000 feet. The magnitude and extent of the ore bodies can, therefore, be imagined from the size of the district, which commences at a point south of the city limits and extends four miles north. The length of the district is about 10 miles. In the heart of the city it is almost impossible to excavate for the foundation of a house without encountering a body of ore rich in precious metals. All of the copper ore, however, is found in the veins passing just north of the center of the city, while south and north of this point silver predominates.

CUSTER MONUMENT, ON THE GREAT BATTLE GROUND.

In many of the copper mines here enough gold and silver is found to pay all operating expenses. This is the case with the Anaconda company's large copper mines. The great mineral veins of Butte are practicably inexhaustible in their supplies of wealth. Experts who have carefully examined into the situation here are confident that centuries of constant mining would not exhaust the ore bodies in the mines of Butte already opened.

Of the real estate and financial agents of Butte, the firm of W. McC. White & Co. is the oldest and most prominent. The gentlemen connected with this firm have, for some years been actively identified with every movement of a public nature in Butte, and they will cheerfully answer any inquiries about the realty, mines or finances of the city. W. McC. White & Co. make a specialty of investing money of non-residents, both in real estate and mortgages.

Anaconda, Montana.—Among the mountains of Deer Lodge County, Montana, a prosperous mining town has sprung up in recent years. The country immediately surrounding Anaconda is bleak and barren. Here and there on the black and rocky sides of the adjacent hills a stunted pine tree struggles for life. Nourished by water trickling down from the melting snow, grass springs up here during the first few days of spring, but the summer heat soon causes it to wither.

Far below Anaconda, and contrasting with its bleak surroundings, is a beautiful green valley through which winds the Deer Lodge river. From this valley the site of the city can be determined by the clouds of smoke which hover over it night and day. Although Anaconda has no mills, factories, wholesale houses, or mines, it contains 2,800 wage-earners, none of whom work for less than $3 a day. Everything consumed in the place is shipped in from outside points. The place depends for its

support upon one industry alone. Yet this city has the finest hotel in Montana and here is published a daily paper which enjoys the distinction of having a circulation larger than that of any other paper in the state.

Anaconda owes its existence to the genius of Marcus Daly, one of the great men of Montana. The poor boy who left Ireland many years ago and landed at at the docks of New York penniless now counts his wealth by millions. This boy was Marcus Daly. The city itself, its newspaper, its hotel and the model cottages in which its workingmen live, are the productions of Mr. Daly. This gentleman selected Anaconda as the site of the reduction works for the treatment of the ore output of the famous Anaconda group of mines at Butte. These mines are today the greatest copper producers in the world. They are owned by a syndicate, of which Mr. Daly is the manager. The works for the reduction of ore, established by Mr. Daily at Anaconda, are the largest of their kind in the United States. Around these works has sprung up the now prosperous city of Anaconda.

ANACONDA SMELTERS.

Anaconda is located 27 miles northwest of Butte and 25 miles southeast of Deer Lodge City. It is connected with the main line of the Montana Union Railway by a branch eight miles in length. A company, of which Mr. Daly is the leading spirit, is now engaged in constructing a railroad direct from the mines at Butte to the reduction works. The works of the Anaconda Reduction Company have a capacity for treating 5,000 tons of ore a day. They employ 2,500 men. About 3,000 tons of copper ore are treated here daily. The company has recently added a new building 640x350 feet in size which contains in addition to its concentrating machinery, stamps and pans for the treatment of silver ore. This plant has a capacity of about 180 tons a day.

The machine and car shops of the Montana Union Railway located at this point furnish employment to 300 men. Anaconda has an electric light plant, water works, a police department, a fire department and a fine opera house. In the matter of public improvements it is far ahead of most cities of equal population in the world.

Stock Raising in Montana.—An industry of Montana that is second only to that of mining in the state, is the raising of cattle on the fine bunchgrass lands of this part of the West. This is a great source of wealth in Montana, and the large cattle owners of the state are no less heavy capitalists than are many of the leading mining men here.

The greater portion of the fine bunchgrass lands of Montana were only a few years ago covered by an immense herd of 6,000,000 buffalo. This vast herd roamed over an extent of country extending from the valley of the Little Missouri to the foot-hills of the Main Divide. Unmolested, except by small hunting parties of Indians who inhabited the country, the buffalo herds constantly increased in number until the threads of the great railroad systems began to stretch their way across the plains toward Montana. With the advent of the iron horse there came an army of pot-hunters. These men poured into the Yellowstone valley and at once commenced their war of extermination against the buffalo. During the first few months millions of buffalos were killed, and a few years of the slaughter effectually did the work of extermination. In 1883 the last remnant of the vast herd was exterminated

A MONTANA RANCH.

near Glendive, and with the exception of a few scattering animals which escaped the general slaughter, and which are protected in the Yellowstone Park, and a few small bands which have been domesticated by the stockmen here, the buffalo which formerly roamed by the thousands over the plains of Montana is an extinct animal. As an indication of the importance the buffalo traffic attained at one time, it may be stated that there was once noticed at Glendive a stack of the hides of these animals 8 feet high and over 1,000 feet long awaiting shipment at this point.

During the time the buffalo of Montana were being killed off thousands of head of cattle began to be driven from Texas and Kansas to the grazing grounds along the Yellowstone and Missouri rivers. This was the commencement in the state of an industry on a large scale. Prior to the time of the influx of these outside herds there had been about 200,000 cattle scattered throughout different sections of the, then, territory. The individual holdings of cattle here were small, but the business of cattle raising, in the aggregate, was an important one in the territory. The cattle industry of Montana dates back to the early 60's, when the bull teams of several freighting outfits were turned loose for the winter on the bunchgrass lands here. To the surprise of the owners of these animals, they turned up in the spring in better condition than they were when turned out to graze before snowfall. This established the possibility of raising cattle here without attention during the winter months, it being proved that cattle could care for themselves on the open plains during even the heaviest snowfalls.

The vast plains and foothills of Montana afford pasturage for millions of domestic animals. Nearly one-half of the lands of the state are valuable chiefly for grazing purposes. It has been found that much of this land, while very rich, will produce only the native grasses, it not being adapted to agricultural pursuits for the reason that it can not be irrigated, and without irrigation crops will not do well here. It is estimated that there are in the state, today, 16,000,000 acres of farming land, and 38,000,000 acres of grazing land. Nature has covered the latter with various varieties of rich grasses which thrive on little moisture. Where the lands are apparently the dryest or most sterile the grass grows in scattered tufts, from which the name, bunchgrass, is derived, while on the richer soils it attains a luxuriant growth. This grass, after reaching maturity, is self-curing. Although apparently dead, it retains its nutritive qualities, and becomes an unsurpassed winter food for cattle and horses. Cattle turned out on the open ranges here have no trouble in keeping in prime condition, except during the severest of winters, and it is only occasionally that severe losses are incurred by the cattle men of this part of the West. The heavy loss which the cattlemen here met with during 1886, when nearly one-third of the range cattle perished from hunger, resulted in some radical changes in the manner of wintering cattle here which had formerly been in vogue. The fencing of large tracts of grazing land, either as leased property or when taken up under the desert land law, is generally the system now adopted by Montana cattlemen. This system enables the cattlemen here to drive their cattle to close ranges in winter, and if necessary, owing to heavy snowfall, to feed these corralled stock with hay. This has resulted in largely reducing the loss incurred by cattlemen here, and it accords more with the views of the various humane societies throughout the coun-

try who entered the most earnest protests against the heartlessness of allowing thousands of cattle to starve to death during severe winters.

At one time the cattle business of Montana was practically controlled by a few individuals or companies, whose herds appropriated the greater portion of the ranges here. The tendency of late years, however, has been rather to increase the number of small ownerships of cattle and there are today thousands of stockmen in the state where a few years ago the herds were controlled by hundreds. The cheapness with which stock can be fattened on the ranges here and the natural increase of the herds has made cattle raising in the state a most profitable industry. The growth of this industry is indicated by the following figures: In 1877 there were 182,659 cattle in the territory, in 1880, 274,316 head; 1884, 509,768, head; 1885, 613,882 head; 1886, 663,716 head; 1887, 471,171 head; 1888, 488,467 head; 1889, 650,033 head; 1890, 649,757 head; 1891, 621,742 head; 1892, 684,090 head. Over one half the cattle now in the state are on the ranges of Custer, Chateau and Dawson counties. In these counties are the immense herds and large outfits of the bonanza cattle concerns of Montana. The annual round-up of these great herds and the scenes connected with their care present one of the most picturesque phases of Western life around which even literature and art have already woven a veil of romance which appeals with equal force to the educated and the untutored mind alike.

The cowboys who take care of the immense herds of cattle in Montana are an active and fearless body of young men. They are splendid horsemen and with their ponies, lariats, branding irons and picturesque personal attire form an interesting feature of life on the plains. The relative rank of the "cow counties" of Montana with the number of cattle in each in 1892 was as follows: Custer, 200,000; Choteau, 108,375; Dawson, 86,541; Fergus, 69,373; Yellowstone, 28,583; Madison, 25,393; Meagher, 24,714; Beaverhead, 23,111; Cascade, 22,573; Park, 21,380; Gallatin, 18,298; Deer Lodge, 18,900; Lewis & Clarke 14,684; Missoula, 12,053; Jefferson, 8,722; Silver Bow, 1390; total for the state, 684,000. The assessed valuation of this stock was $110,296,003. It is estimated that the cattle in Montana increased eight per cent. in 1893 and that the showing for the present year will be equally as satisfactory.

There is still room in the thousands of acres of good land now lying idle along the numerous streams for increased cattle raising in the state. This land can be secured at a nominal cost. Back of nearly all the rich bottom lands are splendid grazing ranges. Many of these ranges are unappropriated today. A settler with moderate means can start here with a small band of cattle and if he takes good care of his stock during the winter it is only a question of a few years hence when he will be independent.

Next in importance to cattle raising in Montana is the raising of sheep and the handling of wool. In every county of the state are thousands of sheep the handling of which is attended with most profitable results. The mountainous portions of the state furnish good grazing grounds for sheep and there are still vacant in the state thousands of acres of grass-covered hills, lands especially adapted to this industry. The United States department of agricultural statistics places Montana seventh in the list of sheep-raising states, the states ranking ahead of Montana in this industry being as follows: Texas, Ohio, California, New Mexico, Oregon and Michigan. The first record of Montana sheep is found in the territorial auditor's report for 1868. This report states that the total number of sheep assessed that year was 1,752 head of a total valuation of $9,685, or about $5.50 per head. In 1892, 24 years later, the total

number of sheep in the territory had increased to 1,884,086 and the assessed valuation of this immense flock was $5,098,931. The growth of the sheep industry of the state is shown by the following figures. The number of sheep found in the state in the different years was as follows: 1877, 79,288; 1880, 249,978; 1884, 593,896; 1885, 798,682; 1886, 968,298; 1887, 1,062,141; 1888, 1,153,771; 1889, 1,368,848; 1890, 1,555,116; 1891, 1,597,753; 1892, 1,883,840. The returns of 1893 showed that Choteau county is now the principal sheep-raising section of the state, and that the three counties Choteau, Fergus and Meagher contain considerable more than one-half of all the sheep in the state. The sheep of Montana yield annually 14,000,000 pounds of wool and the value of mutton sold here annually is $2,200,000.

The raising of horses is also a great industry of Montana. Horses here are left to graze on the ranges throughout the year, they receiving little if any attention from their owners even during the severest winters. These horses are rounded up at certain intervals and shipped to Eastern points for sale. The range horse industry of Montana has maintained a healthy growth through a long series of years and it is now one of the permanent resources of the state. Its development is recorded by the territorial and state auditor's reports as follows, the number of head of horses in Montana being given after each year: 1879, 44,416; 1884, 99,843; 1885, 114,925; 1886, 127,748; 1887, 136,978; 1888, 142,040; 1889, 160,940; 1890, 161,962; 1891, 161,311; 1892, 169,259.

Montana possesses in addition to the range stock, a large number of valuable standard-bred horses and cattle, and some of the greatest thoroughbred running horses in America. The raising of thoroughbred horses is now successfully and extensively carried on in the Deer Lodge and Bitter Root valleys. At Hamilton, in the last named valley, Marcus Daly has established one of the largest horse ranches in America. A number of English and Norman draft stallions have been imported into the state and are used for breeding with native horses. The small farmers of the state and the leading stock men are now raising a fine breed of cattle and in the near future Montana will be as widely known for its blooded animals as it is now famous for its range stock.

The Vigilantes of Montana.—Nowhere in the world is justice more impartially administered or is crime more severely punished than it is in Montana. In nearly every city of the state are stately temples of justice, the tribunals of which are presided over by fearless and impartial judges. Every hamlet has its well disciplined police force or constabulary, and the citizens here absolutely secure in the possession of their property and in the safety of their lives are more free from the depredations of the lawless element than are even the people of New York. In marked contrast to the safeguards now thrown around life and property here, and the law-abiding and peaceful citizens now domiciled in Montana, was the lawlessness of the camps and the turbulent element residing here in 1863.

In the early 60's the settlements of Montana were over 400 miles distant from any official authorized to administer an oath, and there was no officer authorized to administer the law nearer than the Mormon towns of Utah. The outlaws and desperadoes who flocked to the newly discovered placer diggings of the territory, finding there was practically no restraint put on their actions here, at once commenced a career of crime. The atrocities of the criminal element continued until determined and law-loving men banded together and formed the Vigilance Committee of Mon

tana. A detailed recital of the acts of this committee, and the crimes perpetrated by the outlaws if published would fill a volume. A short account of the work of this committee in the present publication will be found of great interest, however. THE OREGONIAN is indebted to T. J. Dunsdale's work, entitled "The History of the Vigilantes," for the following summarized account of the work of the vigilantes of Montana.

In 1863 Bannock and Virginia City were the two principal mining camps of Montana. The first named camp sprung into existence on Grasshopper creek in the spring of 1862. Virginia owed its birth to the discovery of rich placer diggings in Alder gulch in June, 1863. These camps, now well governed towns, are situated 75 miles apart from each other. In 1863 and 1864 it is estimated that their combined population exceeded 15,000. With the thousands of gold hunters that flocked to these camps there also came many desperadoes, outlaws and abandoned women, who, scenting the prey from afar, flew like vultures to the battle field.

The streets of Virginia and Bannock in the early history of the camps presented scenes which will doubtless never again be witnessed in a civilized community. On all sides there were saloons, dance halls, bawdy houses and gambling dens. The patrons of these resorts were constantly quarreling with each other, and disputes were commonly decided on the spot by the knife or the revolver. Wounded men lay almost unnoticed about the camps, and a night or a day without a shooting or a serious cutting or shooting escapade would have been recognized as a small and welcome installment of the millenium. So far were the depredations of the lawless element carried that it was unsafe for respectable people to venture out of doors after nightfall. Every few days there would be found lying on the highway the murdered and robbed body of some unfortunate miner. Women of easy virtue promenaded through the camps habited in the gayest and most costly apparel. Drunken desperadoes booted, spurred and armed to the teeth, paraded through the streets, ready to commit homicide on the slightest provocation. The trails leading into the camps were infested by a band of road agents under the leadership of the notorious Henry Plummer. This individual, known among his friends as "a perfect gentleman," was in reality not only a professional gambler but also one of the most dangerous villains in the territory. He was a man of prepossessing appearance, well educated, and with a certain degree of refinement that made for him many friends. He concealed for a time his many misdeeds under an assumed cloak of gentility, and even while chief of the road agents he managed to induce the miners to elect him to the responsible position of sheriff of Montana. He appointed his deputies from his band of robbers. The members of this gang were scattered all over Montana. Many a miner, after having toiled for months in amassing a few thousand dollars in gold dust, left camp for home, only to be robbed and possibly murdered by the very men who were sworn to protect him and on whom he relied for protection.

So bold did these miscreants become in time that they made little effort to conceal their identity. Men who had been robbed on the open highway, on returning to camp, would often see their plunderers lounging around the streets, but so great was the dread felt of these malefactors that the innocent sufferers by their misdeeds dared not to accuse them, and under the authority of the law Henry Plummer robbed and ruled the community as the fancy seized him.

By the discoveries of the bodies of several victims of this band and through the confessions of several of the murderers before they were executed and through the valuable

information sent to the vigilante committee, it was discovered to a certainty after several months of these depredations that 102 people had been killed by Plummer's gang and their confederates in various places, and it was believed in addition to this, scores of unfortunates had been murdered and buried whose remains were undiscovered and whose fate to this day is not definitely ascertained. All that was known definitely regarding these missing people was that they started from camp with sums of money in their possession and were never heard of afterwards. Such was the condition of affairs in Montana when five of the leading men of Virginia City and four of the best citizens of Bannock started the movement which resulted in the formation of the vigilance committee of Montana. Nearly every law-abiding and respected resident of the territory at once joined this organization and within a few weeks after its formation every desperado in the West knew that the voice of outraged justice had spoken in no uncertain tones. It was about this time that a most atrocious cold-blooded robbery and murder, committed by George Ives a renowned desperado, aroused the law-and-order element of Alder gulch to prompt action. Ives and two or three members of Plummer's gang were arrested by a committee of citizens and brought to Nevada for trial. Tidings of the capture spread rapidly through every inhabited part of Montana. Couriers were sent by the road agents to inform distant members of their band that the life of one of their number was in danger. The arrest of these men caused the most intense excitement and hundreds of men anxious to be present at the trial soon reached Nevada from Virginia and the other camps of Alder gulch.

Ives was tried in the open air in the presence of the whole body of citizens. The miners reserved to themselves the ultimate decision of all questions arising during the trial, but, fearing that an injustice might be done the prisoner, they appointed an advisory jury consisting of 24 men. Never has there occurred in the West a more sensational or dramatic trial. Before the arrest of Ives, citizens had spoken of the atrocities of Plummer's band with bated breath. Even during the progress of this trial many of the spectators expected to see the judge and jury shot down by the outlaws and their friends. Not only was the fate of Ives depending on the result of this trial, but also the lives of numerous other desperadoes, and the question of the future preservation of law and order in Montana. It was the crisis of the fate of the territory. The judge, prosecutors and jurors, in taking an active part in the Ives trial, staked their lives for the future welfare of society. Judge Byam shouldered the responsibility of the whole proceedings, and the prosecution was conducted by Colonel W. F. Saunders, now one of Montana's foremost citizens. The defense of the prisoners on this trial was conducted by several able lawyers.

In the center of the crowd at this famous trial, and surrounded by a guard armed to the teeth, was a wagon occupied by the judge and advocates. Seated near the wagon was the jury, and in front of the jury the prisoner was seated, heavily ironed. After listening to the evidence the jury retired for deliberation and, within an hour, returned with the verdict of guilty. Colonel Saunders then mounted the wagon and moved that George Ives be forthwith hanged by the neck until he is dead. The prisoner was led to the scaffold in 58 minutes after his doom was fixed. A perfect babel of voices saluted the movement. Every roof was covered, and cries of "hang him," "don't hang him," "banish him," "I'll shoot," "—— their murdering soul." "let's rescue him," were heard on all sides. The guard around the prisoner stood like a rock, however. They heard the muttered threats of rescue from the crowd

before the prisoner was led out, and they stood ready to keep the rescuers back with rifle balls if necessary. As the prisoner stepped on the large dry goods box above which hung the hempen noose, however, the noise ceased, and the stillness became even painful. The noose was quickly adjusted, and to the usual question as to whether the condemned man had anything to say, brought forth the reply: "I am innocent of this crime." All being ready, the signal was given; the ominous click of the gun locks rang sharply and the gun barrels flashed in the moonlight as they were brought to bear on the crowd. The box flew from under the murderer's feet with a crash and the body of George Ives swung in the night breeze facing the moon that lighted up the scene of retributive justice. As the click, click of the locks sounded their note of deadly warning to the intended rescuers, the crowd stampeded in wild confusion, even rolling over one another shrinking and howling with terror. A few resolute desperadoes who knew not fear, but seeing that their case was hopeless and that their comrade was dead, retired with muttered curses of the fate that had befallen them.

George Ives was a young man of rather prepossessing appearance, probably about 27 years of age. The carriage of this renowned desperado was sprightly and his coolness imperturbable. Long practice confronting danger had made him absolutely fearless. He would face all danger of death with an indifference that had become a part of his nature, and the spirit of reckless bravado with which he was animated made him the terror of the citizens. Ives' death, however, sounded the death knell of the Plummer gang's desperate acts, and it was a realization of this fact by the discerning members of the band that caused them to take the execution of Ives so seriously to heart.

George Hilderman, a petty thief, was arrested by the same committee that captured Ives. His gastronomic feats at Bannock had procured for him the name of the Great American Pie-eater. He earned this title by placing his capacious jaws over a layer of ten pumpkin pies and biting through their entire thickness. As pies at that time were worth $1.50 apiece the pastime was an expensive one. He escaped the results of lawless pie-eating, but the committee banished him from Montana for his petty stealing.

Following the execution of Ives, all the prominent friends of justice were dogged, threatened and watched by the roughs. An attempt was made to kill Colonel Saunders and the lives of other men prominent in the trial of Ives and who have since gained a national reputation, were in constant jeopardy. The ramifications of the league of safety and order, however, extended in a week or two after Ives' execution all over the territory, and on the 14th day of January, 1864, the *coup de grace* was given to the power of the band by the execution of five of the chief villains of Plummer's band at Virginia City. In the meantime a number of highly dramatic events occurred, the most startling of which was the execution of Henry Plummer himself, the chief of the road agents and the sheriff of Montana.

The vigilantes of Bannock arrested Plummer just as he was preparing to leave the country. At the same time Stinson and Ray, two members of the band, were taken into custody. Through the darkness of night the three prisoners were marched to a scaffold erected a few yards from the camp. The spectators were allowed to come up to within a certain distance, but they were halted here by the guard who refused to allow them either to depart or to come nearer the dead line on pain of being instantly shot. Plummer exhausted every argument and plea that his imagina-

tion could suggest in order to induce his captors to spare his life. He begged to be chained down in the meanest cabin, he offered to leave the country forever, he wanted a jury trial, he asked for time to settle his affairs and falling on his knees with tears and sighs declared to God that he was too wicked to die. He confessed his numerous murders and crimes and seemed almost frantic at the prospect of immediate death.

After the execution of Ray and Stinson, the order to "bring up Plummer," was passed and repeated, but no one stirred. The leader went over to this "perfect gentleman," as Plummer's friends called him, and was met with the request to "give a man time to pray." Well knowing that Plummer relied for a rescue on other than Divine aid the leader said briefly but decidedly, "Certainly, but let him say his prayers up here." Finding that all efforts to avoid death were useless, Plummer arose and said no more prayers. He mounted the gallows which he himself had erected in his capacity as sheriff for the execution of a murderer sentenced by a miners' jury. He slipped off his necktie and threw it over his shoulder to a young friend who had boarded at his house and who believed him innocent, saying as he tossed it to his friend, "Here is something to remember me by." In the extremity of his grief the young man threw himself weeping to the ground. Plummer requested that his executioners give him a good "drop" and a moment later the most polished but desperate villain that ever terrorized Montana was dead.

The effect of the execution of Plummer wes electrical. There was much yet to be done, however, to insure lasting peace to the community. By this time eight of the road agents had met a felon's death. There were still, however, many bloodthirsty villains at large. These men had made constant threats against the members of the vigilantes, and a plot to rob several stores in Virginia had been nearly matured when it was discovered. Every man who had taken part in the pursuit of the criminals in Montana was marked for slaughter by the vigilantes, and the work of the vigilantes remained unfinished until the last of these miscreants was captured and summarily executed on the scaffold.

On the 13th of January, 1864, the executive committee of the vigilantes, in solemn conclave assembled, determined on hanging six of the outlaws forthwith. Express messengers were sent to inform the members of the vigilantes of the neighboring towns of Alder Gulch of the action decided on by the executive committee. All that night grim and determined men rode towards Virginia City. The breaking of dawn on the following day found the pickets of the vigilantes stationed on the crest of every eminence and point of vantage around the city. The news flew like lightning. Many a guilty heart quaked with fear, and many an assassin's lips turned pale, and the roughs quaked with inexpressible terror. The detachments of the vigilantes, with compressed lips, for they were thoroughly in earnest, marched into the town and halted in a body on Main street. Members of the band were at once detailed for the capture of the road agents, and all succeeded in their mission except the ones who went after Hunter, who managed to escape by crawling out of town through a drain pipe.

Frank Parish was the first desperado brought in. He was arrested without the least trouble in a store, and he seemed not to expect death. He even took the executive officer aside and coolly asked what he was arrested for. He was told for being a road agent and a thief. At first he pleaded innocence, but at last he confessed to having committed many crimes.

Club-Foot George, as he was known (George Lane), was brought in. He was perfectly cool and collected, and on being told that his sentence was death, quietly asked for a minister. He evidently thought no more of hanging than the ordinary man would of eating his breakfast. Boone Helm was seized before he was able to make an effort towards resistance. A man at each arm and one behind him with a cocked revolver, brought him to the place of rendezvous. Helm lamented greatly that he "had no show" when taken, and he quietly added, "they would have had a gay time taking me if I had known what they were after." He said further: "I am as innocent as the babe unborn. I have never killed anyone, or defrauded any man. I am willing to swear it on the Bible." Anxious to see if he was really so abandoned a villain as to swear to this, the book was handed him, when, with the utmost assumed solemnity, he repeated an oath to that effect, making the most terrific penalties on his soul in case he was swearing falsely. He kissed the book most reverently. He then addressed a gentleman present, and asked him if he would accompany him (Boone) into a private room. Thinking that Boone wanted someone to pray with him, he proposed sending for a clergyman, but Boone quietly retorted, "You'll do." On reaching the room the prisoner asked his friend if there was no escape from his present predicament. Being told that there was not, and that he must die, Boone admitted that he did kill a man named Shoot, in Missouri, after which he escaped to the West. He also admitted killing of a "chap" in California.

Helm was the most hardened, cool and deliberate scoundrel of the whole band, and murder, with him, had become mere pastime. Finding that all his asservations and pleas availed him naught, he thus unburdened himself: "I have dared death in all its forms, and I do not fear to die." He called repeatedly for whisky, and it was necessary to reprimand him several time for his conduct on the verge of eternity. The other two outlaws, Haze Lyons and Jack Gallagher, were brought in, the former penitent and the latter abusing and cursing his captors.

After all arrangements had been made for hanging the desperadoes the prisoners were marched into the center of a hollow square which was flanked by four ranks of the vigilantes and by a column in front and rear armed with shotguns and rifles carried at half present, ready to fire at a moment's warning. Other members of the vigilantes, armed with pistols, were dispersed through the crowd. The party started forward and marched to an unfinished building which had been prepared for the execution. The main beam for the support of the roof, which ran across the center of the building, was used as a gallows, the ropes being thrown over it and then taken to the rear and fastened around some of the bottom logs. Five boxes were placed under the beam as a substitute for drops. The procession halted for a few moments before reaching the place of execution, Club-Foot George having called a citizen to him and asked him to speak regarding his character. This the gentleman declined to do, saying to George that while their dealings with each other had been square he was not competent to speak of the prisoner's dealings with other people. Club-Foot George then asked the gentleman he had spoken to to pray with him. This request was granted, both men kneeling down and offering a fervent prayer. George and Jack Gallagher also knelt in prayer. Boue Helm, after the prayers were over, called to Gallagher, "Jack, give me that coat; you never gave me anything." "D——d sight of use you'd have for it," replied the man who had been on his knees a moment before. The two worthies after this kept addressing short and pithy remarks to their friends around them, such as "Hello! they have got me this time." "Bill, old boy I'm going to cash in, sure," and other remarks typical only of wild mining life.

The guards finally marched into the place appointed for execution. They opened ranks here and the prisoners stepped onto the boxes above which hung the dangling ropes, the nooses were quickly adjusted and all being ready Jack Gallagher got a stay of proceedings by asking as a last request for a glass of beer, which was given him. Club-Foot George, recognizing an old friend in the audience, cooly hailed him with the remark, "Good-by, old fellow; I'm gone," and hearing the order, "Men, do your duty," without waiting for the box to be knocked from under him, as coolly jumped to his death. Jack Gallagher used the most profane and obscene language while standing on the box awaiting execution, a tirade he kept up until the tightening noose cut him short. The character of Boone Helm can be judged by his careless remark as he looked at the quivering form of Gallagher dangling by the rope, "Kick away, old fellow; I'll be in hell with you in a minute." Helm's last words were, "Every man for his principles; hurrah for Jeff. Davis; let her rip." The sound of his voice had hardly died away before he too was hanging from the rope. Frank Parrish requested the privilege of having a handkerchief tied over his face. His own black tie, fastened in the road agents knot, was taken from his throat and dropped over his face like a veil, and with this death mask he was dropped. A bystander, after the execution, asked a guard who had adjusted the rope around the neck of Parrish, if he did not feel for the poor man when he put the rope around his neck. The vigilante, whose friend had been murdered by road agents, regarded his interrogator for a moment with a stern look and then answered slowly, "Yes; I felt for his left ear." Haze Lyons evidently expected deliverance from death up to the last moment. Finding, however, that entreaty was useless, he requested that his gold watch be given to his mistress with his dying regards.

The bodies of the desperadoes, after being allowed to hang for two hours, were cut down and carried to the street in front of the house, where they were found by friends and carried away for burial. Their bodies now lie in the cemetery at Virginia.

These last executions ended the rule of the road agents in Montana. Where once rode masked highwaymen and midnight marauders in the state are now open highways where man is assured of the protection that he has in any of the best governed communities of the United States. It was stern justice meted out to the desperadoes that impressed all wrong-doers with a full sense of the fate that awaited them if they committed any overt acts and these executions at the same time impressed the law-abiding people with their full power when once thoroughly aroused, and it was the moral force of the community that was triumphant here just as it always is in any civilized country after the man who respects his own rights and the full rights of his fellow man has been goaded to a certain point by the lawless acts of desperadoes and criminals.

British Columbia.—The first settlement made in the vast territory now known as British Columbia dates back to the establishment of a trading post at Fort Victoria, on Vancouver Island, by the Hudson's Bay Company in 1842. It was not until 1871, however, that the mainland north of the 49th degree of north latitude and Vancouver Island were united under the name of British Columbia and entered into confederation with the Dominion of Canada. Victoria was chosen the capital of the new province. The nature of the country was such that only a few people were attracted to British Columbia and, until 1886, the only two towns of importance in the entire province were Victoria, situated on Vancouver Island, and New West-

minster, on the mainland, the latter place being located on the Fraser river, 16 miles above the point where the waters of this stream enter the Gulf of Georgia. In 1886, the Canadian Pacific railroad was completed to tidewater on the Pacific coast. The western terminus of this great transcontinental line is at Vancouver, situated on the mainland, on Burrard Inlet, about 14 miles distant from the old town of New Westminster. Vancouver is today the metropolis of British Columbia. The completion of this greatest of transcontinental roads has marked a new epoch in the history of the province. Before the cars of this road reached tidewater at Vancouver, Victoria was the leading city of British Columbia, and it was one of the richest and most prosperous cities of the coast. It was the one port of British Columbia to which all the diversified productions of the province paid tribute, and it was at this point that countless fortunes were made from the immense trade with the north and east which Victoria so long held. Today, Victoria is still the home of many of the richest men of British Columbia, but her former prestige is gone. Victoria is the leading city on Vancouver Island, the resources of which, when fully developed, will alone support a city at this point of a much larger population than Victoria contains today. Vancouver, however, as the western terminus of the Canadian Pacific, will, probably, always remain the leading city of British Columbia, and it is at the present site of Vancouver that the people of the province expect to see a city grow that will some day rival San Francisco or Portland in wealth and commercial importance.

British Columbia is a country of wonderful possibilities. Long before a city of any pretensions had been established on the shores of Puget Sound, the rich gold deposits of the Fraser river and of the Caribou district farther inland had attracted gold seekers from all over the coast, and the Fraser river gold excitement of the early 60's was second in importance only to the great rush of gold hunters to California a little more than 10 years earlier. British Columbia is essentially a mountainous country. Far to the interior of the province are found those same vast plains, covered with alluvial deposits of the richest soil, which are found in Eastern Oregon and Eastern Washington, but for a distance of 200 miles or more inland from Puget Sound the province is one vast upheaval, mountain piled on mountain, and the entire section is generally rough and uneven. Lying between the higher elevations of this part of the province are many little valleys easily cultivated and highly fertile. The principal sources of wealth of the province, however, prior to the time of the completion of the Canadian Pacific, were the wonderfully rich gold mines of the interior, the great coal deposits of Vancouver Island, the fisheries of the Fraser river and of the Gulf of Georgia, and the vast quantities of fur-bearing animals which were annually trapped along the coast and in the streams of the mainland. These were products that were easily convertible into money. The lack of proper transportation facilities and the cost of reaching the province necessarily kept people out of British Columbia, and the result of these conditions, which existed prior to 1886, was that money was plentiful here, and Victoria, the leading city, may have been fairly said to have rolled in wealth, a tribute she exacted from the immense trade which for many years regularly came to this port.

The largest body of agricultural land in the western part of British Columbia is found along the Fraser river between the Gulf of Georgia and Yale. Three varieties of soil, all highly productive, are found in the Fraser River valley. These are deep black earth, alluvial deposits and a clay loam. Wonderful crops are raised on these lands and this is truly the agricultural belt of the province. Good lands for agricul-

tural purposes are also found on Vancouver Island, and along the banks of the Thompson river and Shuswap lakes are many fine farms in the highest state of cultivation. East of the Cascades in the province are vast stretches of the finest grazing and farming lands, and the cattle fattened on the succulent grasses of these inland prairies are the largest and best beef cattle raised on the Pacific coast.

The most important industry of British Columbia at the present writing is the mining of coal. On Vancouver Island are found the largest and most valuable deposits of coal on the coast. Nanaimo, a city of about 6,000 inhabitants, located on the eastern side of Vancouver Island, and north of Victoria, is supported entirely by the ten great coal mines situated in the vicinity of the place. Four of these mines are operated by the New Vancouver Coal Company. The daily output of these four mines is 2,400 tons. The coal taken from one of these mines is unexcelled for gas-making purposes. It burns to a red ash, making a fine quality of coke and yielding about 11,000 feet of gas to the ton, of an illuminating power of 22 candles. The coal from another of this same company's mines is burned largely by the steamers plying on the Puget Sound and up and down the coast. The New Vancouver Coal Company employs regularly about 1,400 men. They also use about 140 mules in the mines, these animals working constantly underground. The principal part of the product of the company is shipped to San Francisco, although regular shipments are also made from these mines to Portland, Southern California and the Sandwich Islands.

The Great Wellington coal mines are located at the terminus of the Esquimalt & Nanaimo railroad and operated by the same company that runs the railroad. Wellington coal is the best of the coast coals, and is always in great demand in San Francisco and other coast cities. The output of the Wellington mines is only limited by the transportation facilities afforded for getting it to market. Most of the output of the mines is sent over the Esquimalt & Nanaimo Company's own road to Departure Bay, where the company owns large wharves and coal bunkers. Steam colliers of as high as 3,000 tons carrying capacity carry the coal from Departure Bay to San Francisco and other coast ports. Four miles from Nanaimo are located the East Wellington Collieries, and there is also the rich Comox coal mine near Union, also located on Vancouver Island a few miles distant from Nanaimo.

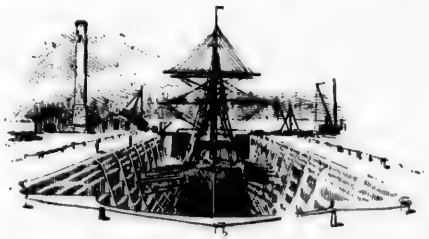
The mountains of British Columbia are rich in deposits of gold, silver, copper, iron and all the baser metals. The greatest of the gold and silver-producing sections of the province today is the Kootenay district. This mineral belt is located in the southeastern part of the province, and contains an area of about 7,000 square miles. The section is enjoying something of a boom at the present time, and during the latter part of 1892 and early in 1893 over 2,000 claims were filed in this section within a period of six months. The old gold diggings around Yale, the Lilloet, Cassiar and Caribou gold-producing districts are still rich in gold quartz and silver ores, and the working of the mines of these important districts will some day prove one of the most important industries of British Columbia.

A large part of the area of British Columbia is covered with dense forests of the finest timber. The varieties of timber found here are the same as are contained in the forests of Western Washington and Western Oregon to the south. The British Columbia timber belt is practically a part of the same forests which extend from the southern boundary of Western Oregon north as far as Alaska, and as the timber resources of Oregon and Washington are fully treated in another part of this publication, any extended mention of the great forests of British Columbia is unnecessary in the present instance.

One of the great industries of British Columbia at the present time is the catching and curing of fish. The great inland streams of the province abound in the succulent salmon, the mammoth sturgeon and other food fishes found in the Columbia and Sacramento rivers to the south, and the waters of the Gulf of Georgia and other parts of the great inland sea washing these shore are alive with the finest of salt water fishes. These waters furnish an inexhaustible supply of the finny tribe, valuable as food products, rich in oil, hundreds of barrels of which are annually exported from the province, and the value of fur-bearing aquatic animals annually caught in these waters runs into the thousands of dollars. During 1890 the product of the fisheries of British Columbia, including seals and oil, reached the enormous amount of $6,550,275. This amount was made up as follows: approximate value of fish consumed in the province, $3,085,000; canned salmon, 400,000 cases, $2,400,000; salted salmon, 3,800 barrels, $41,800; fresh salmon, 2,000,000 pounds, $240,000; smoked salmon, 13,000 pounds, $3,250; fresh halibut, 750,000 pounds, $75,000; fresh sturgeon, 320,500 pounds, $16,025; fresh trout, 20,000 pounds, $2,000; other fish, fresh, salted and smoked, 905,000 pounds, $90,500; making a total of $5,953,575. Add to this 150,000 gallons of fish oil, $75,000; isinglass, etc., $21,700, and seal skins and other furs, $500,000, and we have the grand total of $6,550,275 as the value of the year's product of the fishing industries of the province.

Most of the salmon canned in British Columbia is handled by the many large canneries located on the Fraser river. During 1890 the product of these canneries amounted to 246,050 cases, valued at $1,476,300. Invested in the canneries of the Fraser river is the sum of $1,357,000. These plants employ over 7,500 men during the fishing season and pay out annually in wages about $1,025,000. An important part of the fishing industry of the province is the shipping of fresh halibut, sturgeon and trout to the East. These shipments are made in refrigerator cars, and the fish is landed thousands of miles from where it is caught in as fresh a condition as it was when first taken out of the waters.

The climate of British Columbia, more especially that portion bordering on the waters of the Straits of Georgia, which is the most densely populated, is similar in every respect to the climate of Oregon and Washington to the south. It is a country of the same many and diversified resources as Oregon and Washington farther south, and that part of the United States known as the Pacific Northwest will probably note no greater material growth and solid advancement than the country to the north which is now under the British flag, a country so thoroughly wedded to British traditions, and which has only been kept back by the average Englishman's regard for prestige which so often discourages progress under any regime which ignores precedents.



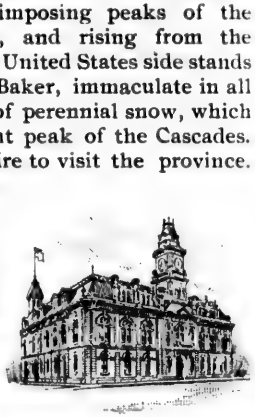
H. M. Dry Dock, Esquimalt.

Victoria, British Columbia.—Victoria, the capital of the province of British Columbia, is situated at the extreme southeastern end of the large island of Vancouver. The most striking feature of the site the city occupies is the rare beauty of this site and its surroundings. The citizens of Victoria honor their city with the

sobriquet of "The Gem of the Pacific," a name which the general attractiveness of the place fully warrants. The surface of the land on which Victoria is built is made up of a succession of hills and level patches, and from the higher elevations of the city is commanded an imposing view of the grand stretch of the Straits of Fuca and the waters of the Straits of Georgia glisten in the sunlight a few miles away, while in the distance are seen the imposing peaks of the Olympic range, and rising from the mainland of the United States side stands the hoary Mt. Baker, immaculate in all the brightness of perennial snow, which covers this giant peak of the Cascades.

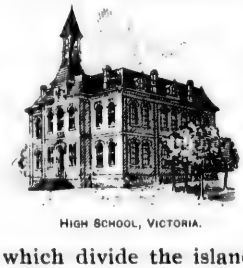
CAREY CASTLE, LIEUT.-GOVERNOR'S RESIDENCE, VICTORIA.

Victoria is the mecca of tourists to Puget Sound who desire to visit the province. The Englishman knows how to enjoy himself. He takes life easy, and he prepares the way for the enjoyment of everyone who visits a city in which the English element predominates. Victoria boasts of the finest driveways on the coast, which lead out from the city in all directions, and of the attraction of the great warships and drydocks at Esquimalt, but a few miles distant. The place has good parks, the numerous arms of the Straits of Fuca extending inland at this point afford excellent boating, the city has the best of hotels, and the tourist here finds as much to interest and amuse him as he will find in any city on the coast.



CITY HALL, VICTORIA.

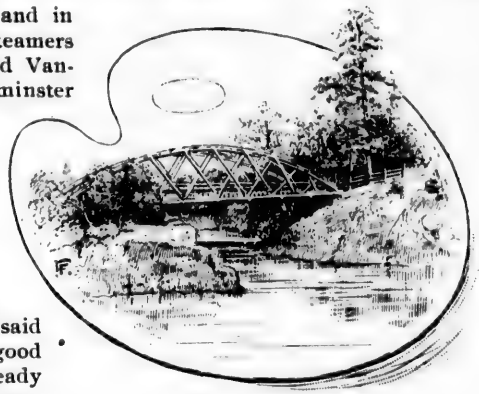
Of late years manufacturing interests have made but little advancement at Victoria. Victoria is a shipping port of considerable importance, and it is a city of great wealth, heaped up here during the palmy days preceding the completion of the Canadian Pacific railway to Vancouver. Although the first settlement was made at Victoria, in 1847, by the Hudson's Bay Company, it enjoyed no large growth until 1871, when the provincial capital for British Columbia was established here. The official census made by the dominion government, in 1891, gave Victoria a population of only 16,849, and the most enthusiastic of Victoria's citizens do not today claim for their city a greater population than 20,000. The growth of the city has been retarded by lack of railroad connection with the mainland. The line of the Esquimalt & Nanaimo railway, which connects Victoria with the great coal mining district of Nanaimo, is the only railway in operation on Vancouver Island at the present time. The Canada Western railway, however, it is hoped, will ultimately reach Victoria from the mainland by taking advantage of the numerous islands in the channel north of Vancouver Island, to bridge the short stretches of water which divide the island and mainland at this point, and the people of Victoria confidently expect to see this line built at a time not far distant.



HIGH SCHOOL, VICTORIA.

Victoria has excellent connection with all the Sound ports by numerous lines of steamers. The fine steamships of the Canadian Pacific Company stop at Vic-

toria, both in coming to Vancouver and in departing for the Orient. Lines of steamers regularly ply between Victoria and Vancouver, between Victoria, New Westminster and Nanaimo, as well as between the leading city of Vancouver Island and all ports of the Sound on the United States side.



THE GORGE, VICTORIA ARM, VICTORIA.

Beacon Hill Park, comprising several hundred acres, is well laid out, good driveways, leading in all directions, and standing in this park are stately oaks whose age is said to represent centuries of time. A good start for a creditable "Zoo" has already been made in this park, and the hundreds of animals already gathered here prove a great source of interest to visitors. Esquimalt, three miles distant, is reached by a perfectly kept driveway, and also by an electric line of road. This is the place of rendezvous for the British squadron of warships on the Pacific coast. The government naval yards and large drydock are established at Esquimalt. The drydock is built entirely of cut stone, and was constructed at great expense jointly by the Imperial and Dominion governments. Another delightful suburb of Victoria is Oak Bay, and this resort is rapidly being built up with seaside homes. As the seat of the provincial government, Victoria enjoys a considerable prestige. The city is an old and wealthy center of population, and it is by far the most attractive city of the province.

BRIDGE AT BEACON HILL PARK, VICTORIA.

Nanaimo and the Great Coal Mines.—The most interesting feature of a visit to Vancouver Island is the trip by rail from Victoria to Nanaimo, where the great coal fields of the province are located. The journey is made over the Esquimalt & Nanaimo railway, a distance of 78 miles. The route lays through the most picturesque part of Vancouver Island. The line passes through what may be fairly termed a sportsman's paradise. The numerous lakes and small streams of this section are stocked with the gamiest of trout. The scenery along the entire line of road is interesting, and at times grand and almost awe-inspiring. One moment the eye of the traveler rests on a peaceful vale with a placid clear lake in the center, and the next moment he is looking through broken and rocky gorges to abrupt forest-clad hills beyond. Many engineering difficulties were encountered in the construction of this line. High trestles, with a seemingly dangerous pitch to one side

HARBOR AT NANAIMO.

of the track, are as trying to the nerves of the timid traveler as the construction of these elevated bands of steel on stilts was to the engineer who planned the line, but it may be stated that no accident has ever occurred on this line, and the entire road is pronounced, by railroad experts, to be one of the best built on the continent.

At the towns of Shawnigan, Chemainus and Cowichan, along the line of road are located a few small sawmills, and in the timber belt which the road traverses, considerable cordwood is cut and shipped to market over this same line. The prime, and it may be said the only object in the construction of this road, however, was to open rail connection between Victoria, the principal city of Vancouver Island, and the great coal districts at Nanaimo and Wellington. Nanaimo, the second largest center of population on Vancouver Island, is located on the east coast of the island, on an inlet which goes by the name of the town. Nanaimo harbor opens direct into the Straits of Georgia. The total population of Nanaimo, at the present time, is about 6,000, and a glance through the directory of the town shows that about three out of every five of the male adult population are either miners or employes in the service of the great mining company operating here. The town is beautifully located, fronting on a broad sheet of water, and the site, rising gradually from the waters' edge, finally reaches an elevation which commands a perfect view of the harbor and the Straits of Georgia beyond. The streets of the town are narrow, so narrow, in fact, that friends can almost shake hands across the narrow driveway which separates the sidewalks, and it is evident to the visitor that the town simply grew here without any attention having been paid to platting the townsite by the original settlers.

Nanaimo's prosperity is practically entirely dependent on the operations of the New Vancouver Coal Mining & Land Company which operates so extensively at this point. This company bought the Nanaimo estate with its collieries, shipping wharves, sawmills and water front from the Hudson's Bay Company in 1862. In Nanaimo coal is king as cotton was in the South before the war. The New Vancouver Company have now five coal mines in successful operation, although these mines have only been opened since 1884. The shafts in these mines run down to the great depth of 600 feet or even more. Double ventilating shafts have been constructed in these mines in compliance with the protective laws governing coal mining in British Columbia. The output of the company's mines is 2,000 tons a day. The company's possessions on Vancouver Island in the vicinity of Nanaimo embrace about 30,000 acres, this estate extending up and down the coast for a distance of 10 miles. Two shafts of the company's mines, the one in Protection Island at the mouth of the harbor opposite the town, and the Esplanade shaft on the outskirts of Nanaimo, across the harbor from the main business center, are connected by passages running under the harbor. Above these passage-ways, through which the black diamond is being constantly hauled, ships ride peacefully on a body of water deep enough to float the largest of vessels. This great tunnel, over one mile in length, is a feat of successful subterranean engineering that must call for the admiration of whoever traverses it. The Esplanade mine is the largest operated here and the main shaft of this mine is

located only a few yards from the company's offices and power houses. The tall, heavy-built chimneys of the great coal mining plants at Nanaimo pour out their volumes of black, heavy smoke day and night the year round. The endless steel cables hauling the coal cars from the depths of the mine, 600 feet below, are run at the rate of speed of half a mile a minute, and the scene of operations of one of the great mines here with its cars of coal being dumped on the surface without cessation day or night, is one that cannot but impress the beholder who is visiting a coal-mining center for the first time. The engines of the coal company's plant of the Esplanade mine have a hoisting capacity of 1,000 tons every eight hours, and at the same time pump water out of the mines if pumping is necessary. Most of the power for pumping is supplied by electricity, generated by the company's own dynamos and power house. The company have for a number of years past been operating far out under the waters of the harbor at Nanaimo and also under the Gulf of Georgia beyond, and they are gradually extending their tunnels and shafts as the mines are opened.

OLD BLOCK HOUSE, NANAIMO.

In addition to operating largely at Nanaimo, the New Vancouver Company also operates mines at Northfield and Southfield, towns in close proximity to the principal mining center. The company regularly spends large sums of money in prospecting over its landed possessions here with diamond drills with the most satisfactory results. They now have sufficient coal in sight here to allow their mines to be continually operated at their present capacity for 80 years in the future. The coal mined here is of a true bituminous character, and is pronounced by experts and the general public to be the best coal mined on the coast. Shipments of this coal are made in very large quantities to San Francisco, San Diego, Los Angeles, Portland, Alaska and all parts of the Dominion. The coal is carried principally in American bottoms, and from four to one dozen ships and steamers are constantly in Nanaimo harbor awaiting their turns to load with coal from the company's mines. The company itself now has regularly 150,000 tons of shipping under charter, and private buyers of the company's product are constantly sending vessels here to be loaded.

The company employs in its mines 1,500 miners. These men work in shifts of eight hours each, and they are generally contented and thrifty. This is a well paid class of labor, and many of the miners here own their own homes. The reporter of *The Nanaimo Free Press*, who is constantly making the rounds of the town, is authority for the statement that these men as a rule drink in moderation, and that crimes of violence among the laborers are of very rare occurrence. The money put into circulation every pay day at Nanaimo reaches at least $100,000, and with the money paid out for wages at the Wellington mines, and the mines of Northfield and Southfield, all of which camps are tributary to Nanaimo, the monthly payroll amounts to more than $200,000.

Nanaimo contains several good brick business blocks, and the town boasts of a good hotel and a comfortably arranged opera house. As long as coal mines continue to be operated here Nanaimo will be prosperous, and as the demand for this coal in all parts of the coast is constantly increasing it is fair to presume that these coal mines will be operated on a more extensive scale with each successive year.

Wellington, five miles north of Nanaimo, is the terminus of the Esquimalt & Nanaimo railway. The coal mines at Wellington are owned and operated by the company operating the railway. Wellington is really nothing but a great coal camp. About 800 men are employed in the mines here. The product of the Wellington mines is similar in every respect to the coal taken out of the mines at Nanaimo, and Wellington coal is too well known on the coast to call for any future mention of its qualities in the present article.

Vancouver, British Columbia.—Vancouver, the largest and most important city located on the mainland in British Columbia, occupies the peninsula lying between Burrard's Inlet and English Bay, just north of the mouth of the Fraser river. It is called the Terminal City, and it is the terminus of the Canadian Pacific railway, and the point of arrival of the three majestic steamships, the Empress of India, the Empress of China and the Empress of Japan, a line run under the management of the Canadian Pacific, and connecting Vancouver with China and Japan. The immense cargoes of Oriental merchandise brought from Asia on these three mammoth steamships are unloaded at Vancouver and dispatched from this point over the Canadian Pacific railway to all points of Canada and the United States. This is one of the greatest of the trans-Pacific lines of steamships connecting the Occident with the Orient, and the establishment of this line has already done much to advance Vancouver's interests.

Daily connection is afforded between Vancouver and Victoria by the steamers of the Canadian Pacific Navigation Company. The Seattle, Lake Shore & Eastern branch of the Northern Pacific railroad is already completed as far north as Sumas, situated on the boundary line between the United States and British Columbia, and work on this line is being rapidly pushed to its ultimate terminus at Vancouver. The Bellingham Bay & British Columbia branch of the Canadian Pacific railway runs daily freight and passenger trains between Vancouver and New Whatcom, connecting at the latter place with the Sound division of the Great Northern railway to Seattle. The New Westminster & Vancouver Electric Tramway Company runs passenger cars each way between Vancouver and New Westminster every hour during the day, making the 14 miles in 45 minutes.

The growth of Vancouver dates from the completion of the Canadian Pacific railway to this point in 1886. Immediately following the completion of this line to tidewater, the advance of Vancouver was so rapid for several years, both in the building line and in the establishment of large commercial houses and banking institutions, that the city partook of something of the degree of prosperity which attends the growth of one of the great centers of population in the United States. Of late years, however, the conservative spirit of the English founders of Vancouver has asserted itself, and a halt has been called in a growth that promised to make Vancouver one of the big cities of the coast.

Vancouver is solidly built. Its buildings have been erected with a view of furnishing as classic ruins, in distant ages of the future, as are found in the old chateaus of France, or the deserted castles of England. During 1893 several handsome brick and stone buildings, both of a public and private nature, were completed at Vancouver, but there is now an evident tacit agreement among property owners of the city that no more large buildings shall be erected here until the present fine business blocks that line all the main streets are fully occupied. The warning from the Vancouver Board of Trade against putting up any more buildings than the business

of the place fully requires, grates a little discordantly on the ears of a typical resident of Uncle Sam's domain, but the English only divorced the church from the state with a fatal inclination to ask government protection of every possible private enterprise.

A number of large saw and shingle mills are operated along Burrard's Inlet and False creek, at Vancouver, and the products of these mills are shipped principally to Eastern Canada, Australia and South America. Several schooners and one steamer were built at the Vancouver shipyards in 1892, and while vessels of small tonnage only have been constructed at these yards in the past, more extensive shipbuilding, it is expected, will be developed at this point in the future. Vancouver is the great shipping point of British Columbia, and it perhaps can be conservatively stated that the city is in the line of a material future advancement that will make this one of the leading distributing centers of the coast.

The surroundings of Vancouver may be referred to as of the majestic picturesque order. Lofty peaks of the Cascades tower high above the city, and two projecting spurs, at the mouth of Burrard's Inlet, so closely resemble lions couchant that the entrance is generally known as the Lion's Gate. Stanley Park, the driveway around which is 10 miles in length, affords an excellent breathing spot for the overworked people of Vancouver. This will become, in time, one of the finest public parks of the British possessions, and already thousands of dollars have been expended in adding to the attractions of this great resort. Vancouver possesses many fine business blocks that would be a credit to the best business street of any city, and the public structures are all of a heavy and attractive style of architecture. The city has good hotels, its banks are on the strongest of financial footings, its stores are well stocked, and with the prestige the city has already gained as the leading center of population and wealth of British Columbia, Vancouver will doubtless always remain the principal city of the Pacific coast north of the 49th degree of north latitude.

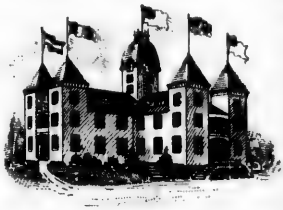
New Westminster, British Columbia.—New Westminster is situated on the north bank of the Fraser river, 16 miles from the point where this great stream empties its waters into the Gulf of Georgia. It is one of the oldest settlements in the province, having been founded in 1858. It is reached from the United States, the northern boundary of which is but a few miles south of the city, by the New Westminster & Southern branch of the Great Northern railway and by the extension of the Canadian Pacific which runs as far south as Mission Junction, near Bellingham Bay. It has direct connection with Vancouver, the terminus of the Canadian Pacific on Burrard's Inlet, by a well equipped electric line of road, and also by a branch of the Canadian Pacific. Steamers ply regularly between New Westminster and Victoria, as well as making connection for Nanaimo and other Sound points. The present population of New Westminster, or Westminster as it is commonly called, is about 7,000. In the palmy days of the city's history this was one of the most prosperous towns of the Northwest. It was the only town of any importance located on the mainland of the province and all of the rich trade of the interior passed this point to reach tidewater. Many fortunes were made here in the early history of the place, and like Victoria, New Westminster is today the home of great numbers of

COURT HOUSE, NEW WESTMINSTER.

wealthy, retired business men who lead a life of ease in elegant residences, and who show a disposition to spend their declining days at the scene of their former business conquests.

The Fraser river is one of the great rivers of the continent. It bears the same relation to British Columbia that the Columbia river does to Oregon and Washington. The Fraser drains the great watershed of British Columbia lying west of the Rocky Mountains, and while it carries a great volume of water practical navigation of the stream is only possible as far up as Yale, a point about 90 miles above its mouth, owing to rapids and other obstructions to easy navigating found in the river above the latter point. Hundreds of miles inland, however, are found great lakes which this river drains which furnish may miles of navigable water and during the time of the construction of the Canadian Pacific regular lines of steamers plied on these lakes carrying passengers and supplies for the railroad company. As far inland as New Westminster the Fraser is navigable for vessels of 21 feet draft, but above this point light-draft steamers only are able to ply.

New Westminster is the principal trading point for the Fraser river canneries and for the rich agricultural district bordering on this same stream. Confidence in the future of the city on the part of its inhabitants is seen in the character of the buildings which line the principal streets. New Westminster is the seat of the penitentiary, the erection of which involved an outlay of $140,000. The provincial asylum also located here, was erected at a cost of $155,000, and the postoffice building here cost $25,000. The construction of four new business blocks at New Westminster involved an outlay of from $50,000 to $75,000 each. Over $200,000 has been spent on the 33 miles of well paved streets of the city and the complete water-works plant involved an expenditure of $380,000 more. A good electric light plant is in successful operation here. The municipal government at New Westminster has spent over $50,000 on a system of fine public parks. The leading one of these, the Queen's Park, contains about 87 acres and is one of the most popular resorts of the city. In this park a permanent exhibition building has been erected and annual gatherings are now regularly held here.



EXHIBITION BUILDING, QUEEN'S PARK, NEW WESTMINSTER.

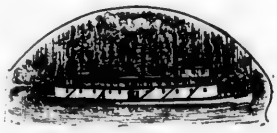
The finances of New Westminster are on a strong footing. Two branches of leading provincial banks are located here and ample money is furnished at all times to meet every legitimate demand of trade. The city is not without attraction to the tourist and it is regularly visited by a large transient travel which finds here a typical provincial settlement and a place that can well claim the attention of the traveler, as a prominent center of British Columbia.

The Kootenay District.—Lying in British Columbia between the Rocky Mountains on the east and the Gold range of mountains on the west, and extending south to the international boundary line is the Kootenay district. This region embraces over 16,500,000 acres and is subdivided into East and West Kootenay. It is in the latter division that the great mineral developments now attracting so much attention from the world are being made, and it is in West Kootenay that the main interest of the present article centers.

West Kootenay is principally a mountainous country. It includes, however, two important valleys formed by a division of the Selkirk range of mountains. These valleys are enclosed on either side by parallel and continuous ranges of mountains which maintain a uniform height of from 5,000 to 7,000 feet. The first of these valleys is that lying between the Selkirk and Gold ranges. It is through this that flows that part of the Columbia river known as the Second Bend as well as the Arrow Lakes. The Upper and Lower Arrow Lakes are deep expansions of the Columbia river itself. The upper lake commences at a point 30 miles south of Revelstoke, a station on the main line of the Canadian Pacific. This lake is considered the most beautiful of all the many waterways of the Kootenay country. Near the opening of the lake is the Northeast Arm which extends inland to the left for a distance of about ten miles. Into this arm flows Fish creek on the banks of which have already been located some promising claims of argentiferous galena.

Upper Arrow Lake is very straight and its waters are hemmed in on each side by high ranges of mountains charmingly regular, with here and there small valleys cutting through them. These valleys are formed by streams which wend their way towards the lake through narrow defiles or canyons. Eighteen miles below Upper Arrow Lake the Columbia river again broadens out forming Lower Arrow Lake. This lower lake is shaped like a bow. It is 51 miles in length and is one of the most striking features of interest in the British possessions north of the United States. The general surroundings of the lake are similar to those of the upper lake. At a point on the east side of the lake, just above where it narrows, thus again forming the Columbia river, is a remarkable landscape view afforded by what is known as Deer Park. This is so named from its attractive and park-like appearance, and from the fact that it is frequented by a large number of deer. At the "Painted Rocks," a few miles below Deer Park are many Indian pictographs which have been rudely painted on precipitous and overhanging surfaces of rock. On the Columbia 10 miles south of the lake is the town of Robson the terminus of a railroad which runs 28 miles east to Nelson. It is this line of road which conveys passengers and supplies to the great mining camps of the Kootenay Lake, and it is at Nelson that the principal trade of this rich section is handled.

The Columbia & Kootenay Navigation Company operates a line of first-class passenger steamboats between Ravelstoke and Robson, a distance of 145 miles. About 90 miles of this distance lie through the Arrow Lakes, the remaining part of the journey being on the waters of the Columbia river. From Robson boats run south into Washington, where connection is made at Northport with the Spokane Falls & Northern railway. The Kootenay river flows into the Columbia at Robson. Nine miles from this point the volume of the Kootenay is increased by the waters of the Slocan river. The sinuousities of the valley of the latter stream are followed by the Columbia & Kootenay railway to Nelson. This valley is 28 miles in length and it is the most picturesque part of West Kootenay. The river here forces itself through a rocky pass to its junction with the Columbia below. The stream is very swift and along its course are numerous rapids. At one point on the river known as St. Agnes falls, the stream is divided into channels, the water in one channel falling vertically a distance of 30 feet and in the other it rushes down a deep chute with frightful velocity. The fall on the north side is a picturesque and striking feature of the river,



STEAMBOAT, UPPER COLUMBIA RIVER.

its beauty being enhanced by the clear blue color of its waters. At certain seasons of the year fine trout may be taken from the basin below the falls in inexhaustible quantities. The other main falls of the river are known as Pillar and Geyser, both of which are situated a few miles below Nelson.

The town of Nelson is situated on the west arm of Kootenay Lake, and it is at this point that the second great waterway and valley of the West Kootenay may be said to commence. It is in this region that the mineral developments now occupying so much attention are being made. Upper Kootenay Lake and Kootenay Lake proper are formed by the Kootenay river and numerous smaller streams which flow into the great basins lying between two distinct ranges of the Selkirk Mountains. Kootenay Lake, around which nearly all the mining camps of this section center, is a magnificent navigable body of water, 100 miles long and from three to five miles wide. The elevation of the lake is 1,750 feet above sea level, while the crests of the mountain ranges which border it rise to a height of from 6,000 to 10,500 feet, the latter elevation, however, being reached by but one or two peaks.

The Kootenay river heads in the Rocky Mountains in East Kootenay. It first flows into the territory of the United States and thence courses back again into British Columbia through West Kootenay. Bonner's Ferry, Idaho, on the line of the Great Northern railroad, is the head of navigation on the river. From Bonner's Ferry it is about 100 miles to the north end of the lake. A line of boats runs between Kaslo and Nelson, on the lake, and Bonner's Ferry. The country surrounding Kootenay Lake has a most interesting history. Its progress during the past four years, more especially during the 12 months immediately preceding the date on which this article is written, indicates that it is rapidly becoming one of the greatest mineral-producing districts in the Northwest.

In the early 60's the section of country bordering on Kootenay Lake was prospected for gold placers, and during that time a little dust was obtained from the beds of some of the creeks here, but not in sufficient quantities to justify the adventurers of those early days in remaining here long. The great deposits of galena on the east bank of the lake were noted by many early prospectors. Yet it is hardly proper to say that these deposits were discovered by them. Long before the country was prospected the officers of the Hudson's Bay Company had utilized these galena ores for making their bullets, and the remains of the primitive furnaces may still be seen here. The first real start the section had as a mining section had its origin in the discovery of the Silver King mine on Toad Mountain, in the fall of 1885. The following spring a few hardy prospectors straggled into the country, but most of these remained here only a short time. Between the time of the discovery of the Silver King and 1890 the Kootenay Lake district was prospected to some extent, but it was not until the season of 1891-92 that the rumors of the fabu-

PHOTO. BY NEELANDS BROS

FIRST PETERBORO ON KOOTENAY LAKE.

lously rich discoveries on Kaslo creek and in Slocan basin began to attract the attention of mining men from abroad. These rumors were not at first given much credence outside of the coast states, but as prospector after prospector returned with samples of ore which assayed over 100 ounces of silver to the ton, the wonderful richness of this district began to be heralded to the world. Careful investigation showed that these samples were taken from large ledges, and this was at once accepted as conclusive proof of the remarkable mineral surface showing of the entire Kootenay district.

These discoveries resulted in the establishment of numerous mining camps which were scattered over the Kootenay country and in the laying out of a large number of townsites. A few of the latter have developed into prosperous towns, but this section, like all other silver-producing belts, has felt the stagnation in the silver market and for the last months of 1893 the section was duller than it was during the early part of the year.

Commencing with the Toad Mountain District, this article will briefly recite the principal features of interest of the more important mining centers of West Kootenay.

The Silver King group of mines on Toad Mountain are the best developed and the most valuable mines of West Kootenay. The ore in these mines is chiefly what is known as Peacock copper, with some copper pyrites and tetrathedite. The stratified rock in which the metalliferous deposits of Toad Mountain have been found appear to be surrounded on all sides by granite. The lode of the Silver King group of mines is of a peculiar character, inasmuch as it has no distinct walls but occurs as a zone of variable and sometimes apparently indefinite width of shattered and mineralized rock, throughout which veins of pure and rich argentiferous ore occur somewhat irregularly. Where gangue appears it is principally quartz, but there is on the whole here a notable absence of crystalized vein matter, the ore apparently filling irregular crevices and running in chutes and spurs into the rock so as to form here and there in considerable masses.

The Silver King mine was bonded to an English syndicate for $2,000,000. About $150,000 has already been expended in development work on the mine and it is estimated that there is now half a million dollars worth of ore lying on the dump in front of the mine. Shipments of nearly 200 tons of ore from this mine have been made to the smelters at Butte, Montana, at a cost of $33 a ton. The ore has yielded on an average 300 ounces of silver to the ton and 28 per cent. in copper.

Other Toad Mountain mines have produced ore which averages 35 ounces in silver to the ton and 12 per cent. copper. On this mountain there is also a gold belt on which some development work has already been done. The free-milling gold quartz found here assays from $15 to $30. These gold properties will prove valuable on a fuller development.

After leaving Nelson and the Toad Mountain mines, the next important mining section on Kootenay Lake is at Pilot Bay. This indentation is located about 20 miles east of Nelson. It is on the shores of this bay that the Kootenay Lake Reduction Company are now erecting a smelter which, when completed, will have a daily capacity of 100 tons. About 70 claims located near Pilot Bay have been recorded. The Hendry group of mines here, of which the Blue Bell is the richest, are the most important in the locality. These mines contain numerous deposits of low-grade silver-bearing galena and also a mixture of iron and copper pyrites. Almost directly oppo-

site the Hendry camp is the town of Ainsworth, with a population of 300. A group of mineral springs is situated in the northern part of the townsite. The waters of these springs contain sulphur and soda and their temperature is about 120 degrees Farenheit. Some radical cures of chronic rheumatism have been effected by the waters of these springs, and they are also beneficial in cases of dyspepsia and general debility.

The mineralized area back of Ainsworth rises abruptly from the lake to a height of nearly 6,000 feet. This elevation is attained, however, by a series of terraces varying in height from a few hundred feet each up to 1,000 feet. On these terraces veins of galena ore run northerly, almost parallel with the lake, and the continuous croppings of these veins may, in some instances, be followed two or three miles without a break. The veins dip to the westward at an average angle of 45°. The ores of most of the mines in this locality run from 25 to 100 ounces in silver, and carry from 20 to 70 per cent of lead. In a few of the mines here very rich deposits of ore have been found, assaying as high as 300 ounces in silver.

There are 20 mines in the Hot Springs camp at Ainsworth on which extensive development work has been done. Ten tons of ore shipped to the Tacoma smelter from one of these mines, yielded an average of $600 to the ton. One hundred tons of ore sent to a Butte smelter from a mine here, averaged 100 ounces in silver to the ton. Two hundred mining claims have been recorded in the recorder's office at Ainsworth, and the indications are that this point will become one of the most successful mining camps on the lake.

Twelve miles north of Ainsworth is the town of Kaslo, which is situated at the mouth of the creek of the same name. The group of mines nearest to Kaslo are situated on the south fork of Kaslo creek, seven miles distant from the town, and are known as the Montezuma group. The principal claim here shows a vein eight feet wide of nearly solid ore, assaying very high in lead, and from 60 to 136 ounces in silver. On the north fork of Kaslo creek several valuable discoveries have been made. Some very rich ledges of gray copper have been found here, but the ore of the group is principally a high-grade galena. On nearly every creek in the vicinity of Kaslo immense ore lodes have been opened up in the past two years. These ores are carbonates, gray copper and galena. A large number of mines in the district have been developed sufficiently to show the permanence of the ledges. That this is one of the most remarkable mineral regions in the West is now admitted by practical mining men and capitalists. Many of the mines here have been bonded for from $40,000 to $80,000 each. Shipments of ore from these mines to the smelters in the United States have yielded, in some cases, over 200 ounces of silver to the ton. Some of the mines in the district have well defined ledges of carbonates and galena, assaying from 300 to 350 ounces. Other mines have certain ledges from 8 to 20 feet wide, which contain high-grade galena ore.

A local paper at Kaslo concisely states the possibilities of this region in the following paragraph: "Within 18 miles of Kaslo there are now discovered more rich mines than there are within 200 miles of Denver, Colorado, which now has a population of nearly 175,000."

The present depressed condition of the silver market is a serious drawback to the development of the mineral properties of West Kootenay. At the present writing it is almost impossible for mine owners to secure capital to develop silver properties which, under more favorable circumstances, would be rich paying mines.

However, the fortunate fact remains to console the mine owners of this section, that the ores here are sufficiently rich to allow the mines to be worked at a profit even if silver should be limited to utilization in the arts. If the present agitation for a universal bimetallic standard of coinage should succeed, as its advocates hope it will, it would result, it is believed, in making the Kootenay district the foremost silver-producing district of the world.

Nearly 28 miles west of the town of Kaslo and about 30 miles north of the confluence of the Slocan and Kootenay rivers, is Slocan Lake. This lake lies in the center of the wonderfully rich mineral district known as the Slocan country. The richest mines in the Slocan district are situated on the summit of the divide between Kootenay and Slocan Lakes. It was not until October, 1891, that the first discoveries were made here. The area of the mineralized zone on this slope is roughly estimated to be from 10 to 12 miles square. In this area the rock is slate or shale of a blackish color traversed by dikes of porphyry, and its limits are clearly marked by the country granite which cuts it off on all sides, except to the east, where it extends across the range of hills through what has been described as the Kaslo country, back of which the granite comes in, making the circle complete. Throughout this area the ledges of high-grade galena are numerous. They are also all definitely known as fissure veins. The ledges run in one unvarying direction, northwest and southeast, while the lay of the slate is also northwest and southeast. The country rocks dip to the east at an angle while the mineral ledges dip just the opposite way. Hardly any ore has been found here running under 100 ounces in silver and 40 per cent. lead, and from this the returns have been way up into the thousands, the results of the assays depending on the proportions of gray copper, native ruby or antimonial silver present in the ore. In this district about 150 claims have already been developed. Along Seatin and Carpenter creeks are a number of prospects that have been bonded for over $40,000 each.

On a mountain called Noble Five Hill is the Bonanza group of mines, valued at $500,000. At the Slocan Star Mine, on London creek, there is a boulder of galena float measuring 125 tons which recently sold on the ground for $5,000. There are dozens of mines here with ores assaying from over 100 ounces in silver. Twenty assays made of ore from this district ran all the way from 20 to 2,000 ounces in silver per ton, the average having been 175 ounces. Many of the mineral ledges here are from eight to 25 feet wide and contain from 18 inches to six feet of solid galena. Never in the history of mining in America has there been a purely surface showing of ore and character of assay equal to that of the Slocan district. On a number of ledges in the Slocan district sufficient development work has been done to show their permanent nature, and mining engineers and experts are of the opinion that none of the galena-bearing ledges of the Slocan slope will deteriorate in value as they become developed. The best and most accessible trail into the Slocan country is the one from Kaslo via Kaslo creek, although there are two other traveled trails and half a dozen passes through which easy ingress is made to the district.

Throughout the entire mineral belt of West Kootenay there are a number of projects on foot for building trails and railroad lines to the more important mining centers, and work on some of these projects has already been commenced. The provincial government is now expending large sums in grading roads to the mines and in a year or two hence the most remote parts of West Kootenay will be reached with but little difficulty from points on Kootenay Lake which are now on the regular lines of steamboat travel.

The Salmon River Mines.—Just north of the international boundary and 22 miles from the British town of Wanita, are the extensive placer fields of the Salmon river. This stream rises near Toad Mountain and flows south, emptying into the Pend d'Oreille river. The latter stream is noted for its varied nomenclature. It rises among the mountains around Butte, Montana, and is first known as Silver Bow creek. When it reaches the Deer Lodge valley it becomes the Deer Lodge river, and afterwards successively the Hell Gate, Clark's Fork of the Columbia, and finally the Pend d'Oreille. Along the tortuous course of this mountainous river are many picturesque bits of canyon structure and a succession of charming landscape scenes. It flows into the Columbia on the boundary line near Fort Shepherd, an old abandoned post of the Hudson's Bay Company. It is at and near the confluence of the Pend d'Oreille and Salmon rivers that the placer mining of the Salmon River district is successfully carried on.

The placer ground in this district consists of a blue gravel containing little, if any, pipe clay. It is rich in coarse gold and it yields on an average 25 cents per cubic yard. In spots the ground is much more productive than this, and a few miners here have realized a large sum by ground sluicing with the most primitive apparatus. Nearly all the gravel banks here are high and it is necessary to convey water to them by ditches from 1 to 10 miles in length. The cost of building a ditch with a capacity of 600 inches of water here is about $2.5 per rod. The Salmon river has a fall of from 20 to 150 feet to the mile. It is believed by experts who have examined the ground here that the largest deposits of placer gold are to be found in the bed of the river.

The Salmon River district is as yet a comparatively unexplored country. It has recently attracted the attention of mining men of wealth, and this, with its accessibility and the richness of its placers, will doubtless lead to its soon becoming the scene of extensive mining operations.

A description of the claim owned by Mr. Rudolph Gorkow, the Spokane brewer, will give a fair illustration of mining on Salmon river. This claim is 130 acres in extent. It is a well developed, dividend-paying property. The gravel on it yields on an average 35 cents per cubic yard. Over $7,000 was spent in improving the claim. A ditch two miles in length with a capacity of 1,500 inches of water was built from Six Mile creek to the mine. The fluming is 800 feet in length. The workmen in setting the sluice boxes here cleaned up $25 in coarse gold off a strip of bedrock 4 feet wide and 12 feet long. This indicates the richness of the ground. There are in use on this mine a number of 4-foot sluice boxes set on a grade of 8 inches to every 16 feet. The plant has a 300-foot water pressure and a capacity of 2,000 cubic yards per day. Associated with Mr. Gorkow in the ownership of the mine are Leo Suter and Captain McCormick.

The Salmon river gravel banks are much richer than those now being worked in California, as the latter yield only 10 cents per cubic yard. Nor far distant from the Salmon river diggings is the Trail Creek district, a mining region of growing importance.

The Trail Creek District.—The Trail Creek district is situated on the west side of the Columbia river, 12 miles from Northport, a station on the line of the Spokane Falls & Northern railway. This district contains a number of developed mines. These are the War Eagle, O. K., Le Roy, Center Star and Josie. In all of

these mines except the O. K., the ore is a sulphide of iron and copper averaging $30 of gold to the ton. A sample ton of ore shipped from Trail creek in 1893 netted $304.

Not far from the head of Trail creek, and separated from it by a low divide, is Sheep creek. In August, 1893, two men working on the O. K. mine on this creek, pounded out $1,200 in gold in a common hand mortar in six days. The ore in this mine is a sulphide carrying free gold and galena. A pyritic smelter will be built at Northport for the treatment of ores from Trail creek. This smelter will cause the thriving town in which it is to be built to become an important mining center. It will also tend to attract attention to the many valuable Trail creek properties now awaiting capital to develop them.

Kaslo, British Columbia.—For several years prior to 1892 many valuable mineral discoveries were made in the Selkirk range of mountains near Kootenay Lake. These discoveries finally attracted the attention of prospectors in the United States and commencing with the spring of 1892 thousands of mining men started for the mineral districts of West Kootenay. In anticipation of the coming of this army of men, an enterprising company staked out a townsite where the Kaslo river empties into Kootenay Lake. The town which sprung up here was named Kaslo and is today one of the leading centers of the great mining district of West Kootenay.

In March, 1892, Kaslo contained but one house. Twelve months later there were over 200 buildings in the town and the population had increased from nothing to nearly 1,600. Not including the town's population at that time, there were 2,500 men prospecting in the mountains near Kaslo during the summer and fall months of 1893.

It is something of an anomaly that the entire population of a town on British soil should consist of citizens of the United States. The most distinctive feature of Kaslo's population is the entire absence of foreign faces and the people here are made up principally of the same types that in the early 60's flocked to Butte, Leadville, Creede and other great American mining camps.

The people of Kaslo have the utmost confidence in the permanency of their town, yet its future at the present writing can hardly be said to be a fixed fact. The hopes and possibilities of the maintainance of a town at this point depend altogether on the future development of the great mineral districts surrounding it. Were it not for the decline in the price of silver, Kaslo could in 1893 have secured ample capital for the development and opening up of the rich mineral discoveries in the vicinity of the town. As it is, many encouraging prospects in the neighborhood of Kaslo are lying idle, properties that in an encouraging condition of the money market would be worth many thousands of dollars. Should silver resume its place as a medium of value which it formerly enjoyed, Kaslo and its immediate tributary mineral belt would become the scene of one of the greatest activities in the mining world.

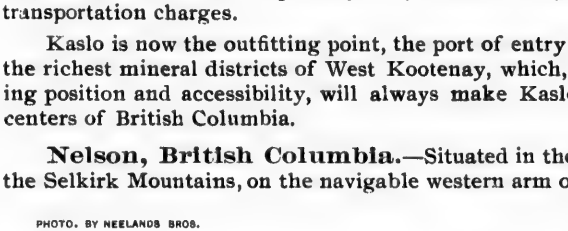
The picturesque location of the town of Kaslo, the mountain-enclosed lake on which it is located and its wealth of scenic surroundings combine to make it one of the most attractive mining camps in the world. Kaslo is easily reached from American points by either one of two routes. One of these is via the Spokane Falls & Northern Railway to Nelson and from thence by a daily line of steamers which operates to Kaslo direct, and the other is over the Great Northern Railway to Bonner's Ferry, Idaho, where connection is also made with steamers running to Kaslo. Kaslo

is about 45 miles east of Nelson, 90 miles north of Bonner's Ferry and nearly 210 miles northwest of Spokane. The town contains several well conducted hotels, and recently the miners here, with the customary liberality of their class, have subscribed for the erection of a church and school house. A wagon road has been graded from this point to tap the rich Slocan country, some 26 miles to the west. A railroad line is also projected to follow the course of the wagon road and some preliminary work has been done on this line. All the supplies for the Slocan district are conveyed from Kaslo by freight wagons and pack mules. These freight trains bring back from the mines sacks of ore which are loaded on steamers at Kaslo and carried away for reshipment by rail to distant smelters in Montana and on Puget Sound. The first shipments of ore from the Slocan-Kaslo district were made in 1893. Although these shipments were small in quantity they netted a large sum of money after paying transportation charges.

Kaslo is now the outfitting point, the port of entry and the base of supplies for the richest mineral districts of West Kootenay, which, together with its commanding position and accessibility, will always make Kaslo one of the leading mining centers of British Columbia.

Nelson, British Columbia.—Situated in the heart of the mineral belt of the Selkirk Mountains, on the navigable western arm of Kootenay Lake, is the town of Nelson, the port of entry and the judicial and commercial center of the subdivision of British Columbia known as West Kootenay. The topography, geographical location and resources of this section are fully described in a separate article published in "The Handbook."

PHOTO. BY NEELANDS BROS.



LOOKING UP KOOTENAY LAKE FROM NELSON.

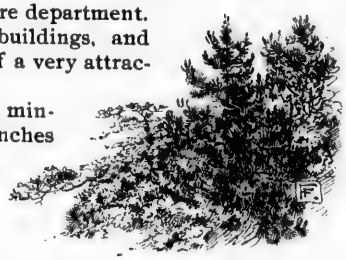
A branch of the Canadian Pacific railway starts from Nelson and extends for a distance of 28 miles to Robson, on the Columbia river, where connection is made with a steamboat line which operates on the Columbia river as far north as Ravelstoke, on the main line of the Canadian Pacific. A steamer also runs south from the rail connection on the Columbia as far as the Little Dalles, a station in Colville county, Washington, on the line of the Spokane Falls & Northern railway. After about February of the present year (1894), Nelson will have direct rail connection with Spokane over the line of the Fort Shepherd & Nelson railway, which is practically a continuation of the Spokane Falls & Northern.

Nelson owes its birth and its present importance as a town to the discovery of valuable ledges of silver quartz, in 1886, on Toad Mountain, six miles distant. It was not until July of 1887, however, that the now famous silver claims of Toad mountain were recorded under the names of the Kootenay, Bonanza and Silver King. These discoveries soon attracted the attention of the Provincial government, railway men and traders, and as a result an excitement was stirred up which resulted in the country being covered with an army of prospectors, and the great influx of people

resulted in the establishment of the town of Nelson in the spring of 1888. In 1891 the railroad was completed to Nelson, and about the same time the Columbia & Kootenay Navigation Company commenced to operate a line of boats from Nelson to points on Kootenay Lake and to Bonner's Ferry, Washington, where connection was made with the Great Northern railway.

PHOTO. BY NEELANDS BROS., NELSON.

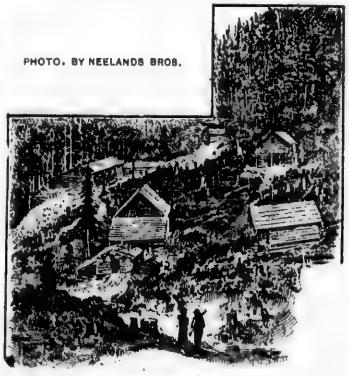
Nelson was at once made the mineral recording point for the surrounding mineral districts, including those of Kaslo, Slocan and the Duncan river. The same year the Provincial government expended $4,500 in making streets and in other public improvements at Nelson. With the substantial support from the government Nelson soon grew to be a thriving town of over 1,800 inhabitants. It now has fine school houses, comfortable church buildings, a fine system of water works, a telephone line, a sawmill, and a good fire department. The leading business houses occupy substantial buildings, and many of the residences of the town are large and of a very attractive style of architecture.



NELSON FROM ACROSS KOOTENAY LAKE.

Nelson is the banking center of the Kootenay mineral districts. There are located at this point branches of the Bank of British Columbia and the Bank of Montreal. In the vicinity of the town is some of the most picturesque scenery in America. The routes of travel to this point, from any direction, and by either rail or water, present an ever-changing panorama of river and mountain views. Kootenay Lake, which is 1,750 feet above sea level, occupies a basin in the Selkirk range of mountains. It is completely hemmed in on all sides by snow-capped mountain peaks, which end abruptly at the water's edge. This lake is over 80 miles in length, and is formed by a widening out of the Kootenay river. The waters of the lake are very deep. The Kootenay river, by which it is fed, suddenly emerges here from a contracted channel and pours its waters into the deep depression which the lake occupies. At Nelson and from this point to its junction with the Columbia river at Robson, a distance of 28 miles, the river again becomes very narrow. For this distance the stream is a turbulent torrent, making three distinct falls over huge ledges of rock before its waters finally join those of the larger stream below. Along this entire distance of 28 miles there is the best of trout fishing. The river here teems with the largest of mountain trout, and during the

PHOTO. BY NEELANDS BROS.



SILVER KING MINE, NELSON.

months of July and August, when the water is low, catches of 75 pounds are frequently made by visiting anglers in a single day's fishing. In the mountains near Nelson are plenty of large game, bear being the most plentiful.

Nelson is at present a mining town depending solely upon the development of the great mineral districts that surround it. That these districts will eventually become the scene of the greatest mining activity in the West is now conceded by practical mining men who have carefully investigated their possibilities. This region is as yet comparatively unknown, but as it is developed the importance of the town of Nelson will increase, and this will probably always remain the chief commercial center of the immense district now tributary to it.

Horticulture in Oregon.—[Extracts from an able article written by E. W. Allen, secretary of the State Board of Horticulture, for THE OREGONIAN'S "Souvenir." It may be mentioned that the lands especially adapted to fruit culture in the State of Washington are similar in every respect to the best fruit lands of Oregon to the south, and any article on horticulture written for Oregon will apply equally as well to this industry in Washington.]

Among the heroic souls who came to Oregon in 1847 was Henderson Lewelling, from Southeastern Iowa. This pioneer conceived the idea of transporting to Oregon a nursery on wheels. This idea he proceeded to put into execution by making two boxes 12 inches deep and just wide enough to fill the wagon bed. These he filled with a composition of earth and charcoal, in which he planted some 700 trees and shrubs. These were protected from the stock by a light framework fastened to the wagon bed. That load was, doubtless, for many reasons, the most difficult one to handle that ever crossed the plains, and yet it has been truly said "that load of trees contained health, wealth and comfort for the old pioneers of Oregon;" and that load of living trees and shrubs brought more wealth to the state than any ship that ever entered the Columbia river. It was the parent of all our nurseries, and gave to Oregon a name and fame she would never have had without it. These trees were planted at Milwaukie, six miles south of Portland, and the sale of fruit and grafts from them brought wealth to the enterprising proprietor. William Meek, who had the forethought to provide himself with a sack of apple seeds before starting for Oregon, arrived here the same year, and a partnership was formed between Mr. Lewelling and Mr. Meek, and the first nursery was started in 1848.

The first stock upon which to bud and graft was secured from plum roots brought from Rogue River valley, and from seedlings grown on French Prairie from apple seeds taken from apples grown on the trees that were produced from the apple seeds brought to this coast 20 years before. It soon became known to the settlers of the Willamette valley that a limited supply of nursery stock could be purchased here, and during the fall of 1848 and spring of 1849 they came from all parts of the valley for trees to set in the yards surrounding the new homes of the pioneers. In 1850 a second nursery was started near Butteville by a Mr. Ladd. George Settlemier (father to J. H. and H. W. Settlemier, present well-known nurserymen), arrived the same year from the East with a good supply of fruit and ornamental tree seeds of different kinds, which he planted on Green Point, but afterwards removed them to Mt. Angel, his present home. The same year Mr. Lewelling returned East and made another shipment of trees, this time selecting them from some of the celebrated nurseries of New York state, and shipping them via

Panama. Thus reinforced by the addition of many new varieties, it may be said that horticulture was firmly and pretty thoroughly established in Oregon.

THE VARIETIES FIRST INTRODUCED.—Among the fruits first planted in Oregon the following well-known varieties appear. In apples, the Gravenstein, Red June, Red Astrachan, Summer Sweet, Early Harvest, Blue Pearmain, White Winter Pearmain, Genet, Gloria Mundi, Baldwin, Rambo, Winesap, American Pippin, Red Cheek Pippin, Rhode Island Greening, Virginia Greening, Spitzenberg, Northern Spy, Swaar and Waxen. In pears, Fall Butter, Bartlett, Seckle, Winter Nellis and Pound. In cherries, Early Kent, May Duke, Oxheart, Governor Wood and Black Tartarian. In peaches, Hale's Early, Early Crawfo• and Golden Cling. In plums, Peach Plum, Green Gage, Jefferson, Washington, Coe's Late Red, Reine Claude and the Little German Prune. In grapes, the Catawba and Isabella. In addition to the above standard varieties, there were a number of Oregon grown seedlings that were not without merit, and many of them have since taken rank as among the first in the catalogue of choice varieties.

PROSPEROUS TIMES FOR THE FRUIT GROWER.—The first box of apples placed upon the market by Lewelling & Meek contained 75 apples, and were eagerly purchased by the fruit-hungry crowd that surrounded them on the sidewalk in the streets of Portland at $1 each. The great immigration to California, caused by the discovery of gold, created a market for everything edible, and the "big red apples" from Oregon were sold at enormous prices to miners and others. In 1853 a few boxes, securely bound with strap-iron, were shipped to San Francisco on a venture, and found a ready market at $2 per pound. A second shipment of 500 bushels was made in 1854 with equally good results. In 1855, 6,000 bushels were shipped and netted the shippers $20 to $30 per bushel. These prices not only stimulated the farmers of the Willamette valley to put forth their best efforts in the planting of fruit trees, but the climate and soil seemed also to vie with these efforts in bringing forth wonderful crop results, and in 1856 20,000 bushels of apples were shipped, one bushel of Esopus Spitzenbergs bringing the shipper a net profit of $60, and three bushels of Winesaps sold on the streets of Portland for $102. Several persons made fortunes from fruit growing, and these persons are at the present day enjoying the well-merited reward of their early labors in thus laying the foundations of horticulture in Oregon. The high prices then obtained gave a great impetus to the planting of orchards, but when these came into bearing the increase of supply brought prices down, and California being the only market available, the supply very soon exceeded the demand, the result of which was that a general feeling of carelessness permeated the fruit growers of Oregon, and but little attention was paid to taking proper care of the orchards, or the enormous crops that they produced. These remarks apply almost exclusively to that part of Oregon known as the Willamette valley. The fruit yield in this valley alone has been estimated at 1,300,000 bushels per annum.

PRUNE GROWING.—The part of the earth's surface where the prune can be grown in all its perfection is comparatively very small, and in no part can the varieties be grown to such perfection as they can in Oregon. France, Germany and Italy are the great prune-producing countries of Europe, and yet in not one of those countries do all the different varieties do equally well. The French, the German and the Italian prunes are each adapted to the country from which they take their name, but in Oregon they all do well, and each variety attains its highest stage of perfection. Oregon had no trouble in taking the four sweepstake premiums on the

above varieties, when placed in competition with prunes grown in these European countries, at the Centennial Exposition, at Philadelphia, in 1876, and again at the World's Cotton Centennial Exposition, at New Orleans, in 1885. There is no fruit in the world so easily produced and so readily prepared for the market, and with so large a percentage of a certainty of a crop, and so remunerative to the grower, as is the prune when planted in a soil and surrounded by a climate suited for it. Thus it is that in Oregon is found that combination of soil and climate in which the prune especially delights and in which it reaches perfection.

The prune is a fruit peculiarly sensitive both to soil and climate. The fruit is a large feeder and reaches its greatest perfection in a rich and heavy soil, with a good under-drainage, but with a sufficient moisture to feed it. The prime requisites in the prune are, a solid, firm flesh that will not ferment at the pit in drying, a rich fruity flavor and bouquet, and a keeping quality that will stand the test of years without serious loss from shrinkage, and those sections of the world which possess the peculiarities of soil and climate which insure these in their greatest perfection are the true and only places where the prune can be grown with success. The drying qualities of the prune are also greatly affected by the different soils in which it is grown. In some localities it will shrink in drying four to one, whilst in others two and one-half pounds of green fruit will make one pound of evaporated. If the climate is too hot when the prune begins to ripen, it shrivels up and becomes leathery; if too cold, the fruit does not acquire the saccharine juices that are so essential to its flavor. This is peculiarly true of the best variety grown, the Italian, which is without question the par excellence of all prunes grown. Thus it will be seen, when the comparison is made between the soil and climate of Oregon as it is, and that required to produce the prune in all its perfection, that here is found the natural home of the prune, and while other less favored sections of the world will continue to produce the prune in a limited extent, still the time will soon come when the consumer will look to Oregon for that prune which will outrival all others in all the essential qualities of the most perfect fruit. The fact that the climate and soil of Oregon are so well adapted to the growth of the prune is but little known even among her own people. A number of her more enterprising horticulturists have, however, succeeded, during the past few years, in demonstrating this fact, and the horticultural pulse has been very much quickened thereby.

It is not within the province of this article to enter into the details of the production of the prune ready for the market, and yet it may not be out of place to give a few figures relative to the cost of planting and caring for an orchard until it comes into bearing or paying condition. The cost of the trees—108—set 20 feet apart each way, together with the plowing, planting and necessary cultivation for the period of three years, will, in an orchard of not less than 10 acres, be not far from $50 per acre.

The trees come into bearing the third year, and reach their full bearing about the seventh. One hundred and fifty pounds of green fruit to the tree is a low estimate of the average yield, and 1½ cents per pound is a low price for the green fruit. The gross amount received from one acre of prunes, at this rate, sold green, would be $243, and the $43 will more than pay the annual expense per acre. By evaporating the prunes, these profits can be still further increased, three pounds of green fruit making one of the evaporated. That these figures are low is evidenced from the fact that many times that amount has been realized per acre from the crop of

prunes produced. Is it to be wondered at, then, that prune orchards in full bearing are valued at $1,000 per acre?

APPLES, PEARS, CHERRIES AND PEACHES.—Apples grow to perfection in all parts of the state. Oregon is justly entitled to the sobriquet of "The land of the big red apple." The tree is indigenous to the soil, the fruit of the orchard is large, and highly colored and of delicate taste. Trees are stout and hardy, and bear so bountifully that without due care they are liable to be broken down by overbearing. All the varieties grown anywhere can be successfully grown here, therefore there is no call for growing a poor variety because it is better adapted to the climate than is some choice one.

What has been said about apples will apply with equal force and truth to the pear. Pears of all the best known varieties are grown and do well in nearly all parts of the state. The trees are hardy, bearing at a remarkably early age, and yielding sweet, mellow fruit, which cannot be excelled either in size or flavor. Nothing is more delicious than an Oregon grown pear. Some specimens attain a weight of three pounds and upwards. So much can be said about the perfection the apple and the pear attain here, that one is inclined to be a little modest when talking about some of the other fruits. Yet the writer has often thought that if there was any one fruit that just reveled in Oregon soil and climate more than another, that one was the cherry. The person that has not seen an Oregon cherry, has certainly never seen one in all its perfection. The trees are hardy and heavy bearers, and the fruit is so superior in size and beauty, that its value for shipping and market purposes, leaves nothing to be desired. There are trees in the Willamette valley that yield annually over 1,000 pounds of fine marketable cherries. All varieties do well here, and yet some of the very best grown are Oregon seedlings, viz: the Black Republican, the Oregon, the Bing and the Lambert. Peaches are grown here in great profusion and perfection, especially in Southern Oregon, and in certain portions of the Willamette valley, and in the district surrounding Portland, and in the valleys adjacent to the Columbia river in Eastern Oregon. With proper care the peach orchard may be made to yield not alone for home consumption, but also for export. Some varieties of this delicate fruit are produced which, for beauty and quality, cannot be surpassed.

APRICOTS, QUINCES AND FIGS.—The apricot, like the peach, does well in the valleys of Southern Oregon and in the valleys along the Columbia river. It has also been found that the apricot is unlike the peach, inasmuch as it will also do well in the strong and heavier soils wherein flourish the apple and the prune. This fact will give it more prominence among the fruits that will be grown for markets, for the apricot is a rapid grower and an early and heavy bearer, and the fruit produced is of the finest quality.

The quince is a fruit but little grown in Oregon, as yet, on account of the limited demand for home consumption. The conditions, however, of the climate and soil are well adapted to the production of the quince in its highest stage of perfection.

The fig is not a fruit that can be grown in Oregon with the same success and perfection as can those before mentioned, but that figs can be grown in Oregon, under favorable conditions and treatment, has been fully demonstrated. Mr. A. T. Hawley, a gentleman and writer of large and extensive observation, both in the Southern states and California, in an article on "Fig Culture in Oregon," read before the State Horticultural Society, after reciting his observations since 1885, says: "The follow-

ing conclusions can be deduced with absolute certainty: Figs of fine varieties can be grown in the valleys of Western Oregon. The most intelligent care must be exercised in the selection of localities for planting. Absolute protection against the frosts and ice of our infrequently severe winters must be carefully provided for. From judicious planting and cultivation of the slips of the acclimated and naturalized trees or bushes already referred to, the shade of the fig tree as well as the vine, could in a few years become a universal feature of Western Oregon landscape." These things are said of the fig, not that it is claimed that any great financial profit will ever be realized from fig culture in Oregon, but that those not acquainted with the climatic conditions of Oregon may be made acquainted with some of her wonderful possibilities, and those who are residents may know that "the value and beauty of every homestead in this section can be greatly enhanced by introducing this healthful and delicious fruit."

GRAPES.—The grape may be profitably grown in nearly all parts of the state, and yet the climate of the lower Willamette valley is not so well adapted to its successful cultivation as are the valleys of Southern Oregon, or those adjacent to the Columbia river in the eastern part of the state. In these localities they may be, and are, produced in unlimited quanties, and of the very best quality. Men of wide experience concede that the grapes grown in Jackson county are unequaled, and enthusiastic wine drinkers have foreseen a "time when all the hillsides of that and adjoining counties will be covered with vineyards, and when the appetites of an overflowing population, appeased by their own beverage, will enjoy life in the shade of the vine, and that the laurels of France and Germany and other foreign wine-producing countries, as well as California, would be wrested from them and worn by the lovely vale of the Rogue river, which will then be the abundant producer of the best wines."

SMALL FRUITS.—Small fruits of all kinds and of all varieties, large in size, delicious in flavor, and perfect in all respects, are easily grown and are abundant in all parts of the state. Some valuable seedlings among the small fruits have been produced here, notable among which may be mentioned, the Oregon Everbearing Strawberry, which is thought to be a seedling of the Triomphe de Gand, which is also an Oregon seedling produced by a cross between the native strawberries of Oregon and West Virginia. This promises to be one of the most prolific and continuous bearers ever produced. Berries from these vines have been grown in the open field, near Portland, and placed in the market as early as the middle of April, and as late as the middle of December.

SOILS AND LOCATION.—In our favorable climate fruit trees of all but the citrus varieties, will thrive and do fairly well in almost any soil or location found in Western Oregon, except dry sand or wet swamp, but there is much to be gained in this as well as in other climates, by a judicious selection of soil and location. A strong loam soil, with just sufficient sand to make it easily worked is, on the whole, the best for fruit trees. The soil most inviting to the eye is the sandy loam. Owing to its loose and very fragile nature it is easily worked, and the rapidity which from its warmth, trees of all kinds attain their growth and come into early bearing, causes it to be looked upon with almost universal favor. The facts are that, on the whole, the light, sandy loam is the worst soil for fruit trees. During the warm summer months the tree needs a soil which will retain and afford a moderate and continued supply of moisture, and here the sandy soil fails, the consequence of which is that the vigor

and health of the tree are impaired, and it is comparatively short lived and unproductive. As a tree in a weak and feeble state is more liable to be attacked by insects than those that are healthy, those that are grown upon light, weak soil are the first to fall a prey to them.

The heavy soils of the valleys and the foothills, are therefore the ones to be selected in preference to the light, sandy soils of the river bottoms. One thing, however, is absolutely necessary to make a success in orcharding, and that is, to see that the land is thoroughly under-drained. If it has not a natural under-drainage, then it should be tiled. Wet, cold feet is the cause of more failures in growing fruit trees in Oregon than all other causes combined.

INSECT PESTS.—Oregon, to within a few years, has enjoyed a freedom from insect pests in her orchards not found in any other fruit-producing state in the union. This was largely due to her isolation from the states thus infested, making it difficult for insects to be transported and find lodgment within her borders. This very desirable—on some accounts—condition of affairs had existed for so many years that many of the fruit growers of the state had settled down to the firm belief that, owing to some peculiar conditions of climate and soil, Oregon was destined to remain exempt from the pestiferous insects that were playing so destructive a part in fruit growing in other parts of our country, where they were contesting the field, as it were, with the orchardists as to which should secure the crop. The advent of railroads, which brought the importation of fruit and fruit trees from other states, brought to our healthy trees and luscious fruits enemies that have, since their advent, waged a war upon them that has brought the thoughtful and observant fruit grower to realize that hereafter in Oregon, as elsewhere, only by eternal vigilance can the big red apple of Oregon be preserved from the ravages of the codlin moth, and the fruit and other trees saved from the destructive greed of the wooley aphis and San Jose scale. This new condition of affairs has, however, been promptly met by proper legislation, creating a State Board of Horticulture, whose business it is to guard against the importation of insects injurious to fruit and trees, and to aid the orchardists in exterminating those that have already found lodgment in our orchards. This board has, during the three years since it was organized, accomplished a good work in that assigned it, and has done much in introducing the new era in fruit growing in Oregon

In addition to the State Board, there is a State Horticultural Society, and a number of county and district organizations, that are doing much to develop and build up this most important interest upon its true basis. It can, therefore, be said that horticulture in Oregon has a bright future before it, and it can be truthfully added that no section of our broad country can offer such inducements to those who desire to engage in this noble and remunerative work as can Oregon.

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